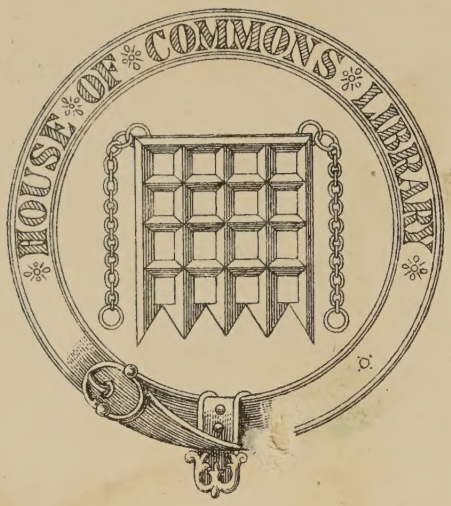
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BRITISH STRATEGY

BRITISH STRATEGY

A STUDY OF THE APPLICATION OF THE PRINCIPLES OF WAR

by

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with

an introduction by

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PREFACE

This book is based on a series of lectures delivered during the last two years in the University of London and at the Staff College. Having been urged to publish them I have agreed to do so in the hope that they may be of use to the student of war. Lectures are normally designed to be an introduction or an aid to further study, and these are certainly not exceptional. They do not pretend to deal completely with a vast subject, indeed several of the matters, to which I have allotted a single chapter, would require a book for their complete exposition. I hope to have aided further study by giving references to authorities, who have dealt more fully with questions which I have merely outlined.

Having devoted some space to the dangers of confident prophecy about the future of war, it will, I trust, be obvious that I make no claim to be a prophet. The most that I have attempted is to indicate the general lines which past experience, examined in the light of present developments, tells us we should follow in preparing our minds for war.

While unrestricted competition in armaments is a danger to peace, controlled preparation is obviously needed for the protection of Imperial and national interests and for the fulfilment of international obligations, until international law and order can be maintained without armed force. In this preparation, thought is as important as the provision and equipment of ships, soldiers and airmen. I have endeavoured

in the following pages to correlate the best thought of the past and to test it by reference to the experience of the Great War and to progress, both social and military, since 1918.

The object of enunciating principles of war is, I take it, not to provide formulæ for use in war, since all history of war shows this to be futile, but to guide thought about war in the right direction. This thought, if it is to be of any value, must be objective. I have therefore, as I explain in Chapter II, endeavoured to examine these principles of war from a point of view which is British; hence my title. In dealing separately with a number of cognate subjects some repetition has been unavoidable, and I have used the same phase of various campaigns to illustrate the application of different principles. I hope that this repetition, which has the advantage of avoiding an excessive variety of illustration, will not prove wearisome. Even so the examples, which I have taken from military history, and chosen as far as possible from campaigns in which the British Army has been engaged, are numerous. To provide maps to enable the student to follow the details of all these campaigns would, I find, increase the cost of the book unduly. Having tried them myself, I have become doubtful of the value of sketch maps in outline with blocks showing the position of armies at various times. These, while they undoubtedly make it easier to follow a text, seem to me to be misleading, in that they tend to make war look too much like a game of chess. Any good atlas will, I believe, enable the reader to follow my illustrations, and for a further study of these he must go to the best histories of the campaigns, which are pro-

vided with adequate maps. I have for these reasons decided to dispense with maps altogether.

I owe it to the courtesy of the General Staff at the War Office that I have been able to bring my references to Part II of the Field Service Regulations into accord with the latest edition.

F. Maurice.

July 1929.

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INTRODUCTION

BY

FIELD-MARSHAL SIR G. MILNE, G.C.B.

CHIEF OF THE IMPERIAL GENERAL STAFF

I WELCOME this book, not only on account of its name, "British Strategy," and the weight which the views of the author always carry, but because, unlike most books on strategy, it is written in language which will appeal to the average reader. For years past British soldiers have been nourished on the ideas of continental strategists, generally expressed in terms untuned to British ears and dealing with situations likely to affect continental Powers more than the British Empire. For purposes of study, the actions of continental armies, led by famous continental soldiers, have displaced the deeds of the British Army under men like Marlborough, Wolfe, Clive, Wellington, Moore, Wolseley, Roberts and Kitchener, to mention only a few of our many great leaders. It is to counteract this tendency that this book is written, and, as General Maurice says on p. 49, "Now the objective study of war presents to the British soldier very different problems from those which confront the soldiers of any other country, because the geographical and political conditions of the British Empire are unique. In the past we were somewhat inclined to forget that important fact and to allow ourselves to apply dogmatically the theories and ideas of continental writers, who were naturally influenced by the conditions not only of their times, but also of their countries. Much as Clausewitz and Foch have to teach us . . . neither mentions the sea."

Again, on p. 243, the author says, " He [the student of war] must think of war not in terms of naval, military and air power separately, but in terms of the application of national power; remembering that our national power in the past has been, in the present is, and in the future almost certainly will continue to be, like no other national power."

This book, in fact, emphasises the special characteristics of the British Empire, and shows that in the application of strategical principles these characteristics confer upon us peculiar advantages and disadvantages. We shall gain full value from these advantages, or avoid the dangers of the disadvantages, only if the principles of war are applied, not only with a practical knowledge of the characteristics and powers of the fighting services, but also with an understanding of the constitution and methods of the Government of the Empire, and of the financial and economic conditions under which it exists. The much-debated question of what may and may not constitute a principle of war is adequately discussed in Chapter II.

Lastly, this book, by elaborating the rather concise statements of an official text-book, will be found a very useful adjunct to the study of the forthcoming edition of Field Service Regulations.

Chapter IX on Mobility brings into true perspective the modern process of mechanisation in the Army.

The author, a distinguished soldier and writer, the son of another distinguished soldier and writer, needs no introduction to soldiers of the Empire, but his work is not only for the soldiers, it merits the attention of all who may be called upon in the future to direct the policy of their country.

G. F. Milne, F.-M.

September 1929.

BRITISH STRATEGY

CHAPTER I

THE NATURE OF WAR

Reasons for the study of war—Foch's opinion—War neither a science nor an art—Clausewitz's definition of war as a development of social life—The wars of the French Revolution—The Great War—Causes of the appearance of nations in arms—Transportation as the limiting factor of the size of armies—Effect of its development—Effect of progress of medical science—These developments not designed for purposes of war—Importance of thinking of war as an aspect of social life—Our mistaken views of war before 1914—M. Bloch's prophecy of trench warfare—His errors—Failure to foresee nature of war general—Mistaken continental views before 1914—The surprises of August 1914—Other examples of surprise developments of war—Many great events of history nearly did not occur—Examples from Great War—Study of the developments of social life some guide to the future—Our increasing reliance on machinery—Its application to war—Importance of industry to war—War a matter of movement—Effect of improved power of movement on power of British Empire—Difficulty of forecasting effect of new weapons—Unexpected the rule both in strategy and in tactics—Leadership in war an art—To be an artist in leadership the mind must be prepared for the unexpected—This preparation must be based upon principles.

It is said commonly that the principles of war are immutable. While this is a claim which requires some consideration, it is indisputable that the methods

of applying these principles vary constantly. War being a very serious and very practical matter, knowledge of its principles in the abstract is of very little value. Those who are called upon to lead in war are concerned with the application of principles to the conditions of the time. As the conditions of one war are never repeated exactly in another war and usually vary greatly, it is a common experience to hear during the progress of a war expressions of impatience with the theories of writers on war in general. On many occasions during the Great War I heard it said: "Books are of no value, this war is like no other war." Since the Great War many have been freely critical of the formulæ of the past, and of those who in their opinion adhered to them blindly when they were no longer applicable. The old claim repeatedly made and repeatedly answered, that experience is the only valuable school of war, is again advanced.

The latest answers to this claim should be conclusive to any mind that is open to reason. On November 1st, 1918, that is, within a fortnight of the conclusion of the Armistice on the Western Front, Marshal Foch re-published his book, *Des Principes de la Guerre*, which had first appeared in 1903 when he was a lieutenant-colonel, and was based on lectures delivered in the previous years at the French Staff College. In the preface to the edition of 1918, after enumerating the conditions which had influenced the events of 1914–18—the size of armies, entrenchments, barbed wire, machine guns, heavy artillery, tanks, aircraft, and poison gas—he goes on: "These are, we see, conditions for the art of war so changed from the conditions of the past that it would seem that the art

itself must be entirely changed. How then can precise rules for its conduct be found in a work published in 1903? Yet the fundamental truths which govern this art remain immutable, just as do the mechanical principles which govern the art of architecture, whether the materials used are wood, stone, iron, or reinforced concrete, just as the principles of harmony, which govern the art of music, remain the same for every kind of music. It is therefore still necessary to establish the principles of war.

"But, as the consequence of changing conditions, those who are called upon to lead troops must prepare themselves to deal with problems of ever-increasing amplitude and variety. They will only acquire the capacity to give prompt and judicious decisions and sufficient confidence in themselves to take such decisions in the field if they have developed their powers of analysis and of forming correct conclusions by an objective study of past experience, that is of history." [1]

A further answer to the assertion that the formulæ of the past are dead is to be found in the editions of our Field Service Regulations published since the Great War. These, for the first time, contain a summary of what our military authorities hold to be the principles of war, and, as will be seen, most of these were formulated more than a hundred years ago and practised long before that time.

Foch, in the passage which I have quoted, speaks of war as an art. Other writers call it a science, and yet others refer to it indifferently as either a science or an art, and there have been many discussions as to the correct category in which to place war. The

[1] Translation from the French preface to the English edition of *Principles of War*, by Marshal Foch, London, 1918.

fact is that war as a whole is neither an art nor a science. There is a part of the business of war which is of the nature of an art, there is another part which is of the nature of a science. In my opinion von Clausewitz was right when he wrote: "War should not be included in the domain of the arts and sciences, but rather in the sphere of social life. It is a conflict of vast interests, which is solved in blood, and only in that respect does it differ from other contests." [1]

War in its highest development is, in fact, as we have good reason to know, a tremendous social cataclysm, affecting every part of the national life. It is primarily because war is a social rather than a purely military development that its nature is progressively changing. Within comparatively recent times we as a nation have been concerned actively in two great world conflicts, the Napoleonic wars and the Great War. Each produced a fundamental change in the nature of war. The French Revolution brought with it the collapse of the regular professional army of France. Confronted by numerous enemies, France in order to defend herself had recourse to conscription, and from the battle of Valmy may be dated the development of the nation in arms, and the whole modern process of mobilisation. Yet the prime cause of these great changes, the French Revolution, was social and political, not military.

What are the factors which made the Great War so entirely different from any other war? There have been in the past many wars which were of longer duration. There have been none in which the opposing armies were permanently in contact. There have been none in which the numbers engaged have been

[1] *On War*, Book II. chap. iii.

so huge. These, rather than shells of great size, thrown great distances, poison gas, tanks, aircraft, were the outstanding characteristics of the Great War. In that war, as in former wars, battles were incidents in campaigns, though they were of longer duration. The feature that was without precedent was that from the first day to the last the guns never ceased firing. This was the consequence of the establishment of a continuous barrier of trenches, which limited manœuvre and kept the opposing armies permanently in contact.

To what was the continuous barrier of trenches due? Primarily to the vast numbers engaged on either side. For the first time in history entire nations were in arms. But the appearance of this phenomenon in the years between 1914 and 1918 was not caused by any drastic change in the machinery for making armies. Conscription, the establishment by law of the right of the State to call every able-bodied man to arms, may, as I have shown, be dated from 1792, the year of Valmy. In 1870 that method of raising armies was well established and almost universal on the continent of Europe. Yet at the outbreak of the Franco-Prussian War of that year we find that the German States placed in the field on the frontiers of Alsace-Lorraine armies numbering 380,000 men, and that France opposed them with armies of 275,000 men. Each Power made the greatest initial effort of which it considered itself to be capable. Forty-four years later, in August 1914, Germany drew up along the frontiers of France and Belgium 1,500,000 men, and France opposed them with armies numbering 1,000,000.[1] The initial military effort of the two

[1] The figures both for 1870 and 1914 represent in round

countries had increased fourfold, and it was rapidly developed until armies came to be numbered by millions, not by hundreds of thousands. There had been no corresponding increase in the man-power of the two countries.[1] This remarkable change, which, as I have endeavoured to show, altered the form and nature of war far more drastically than did any development of weapons or of military methods, was the consequence of other changes that had no direct connection with war.

The prime cause of the expansion in the size of armies, which took place at the beginning of the twentieth century, was the expansion which had taken place in the means of transportation. Napoleon said truly that his armies moved on their bellies, and given an adequate supply of men, the size of armies which can be maintained in the field depends, first and foremost, on the means available for keeping the bellies filled. From the days of Hannibal to those of Napoleon there had been no material change in the means of transportation; roads had improved in numbers and in quality, but the animal-drawn vehicle remained the chief reliance of the commissariat. The development of railways in the first half of the nineteenth century brought about important but not drastic changes. Railways enabled the rate at which armies could be set in the field to be greatly speeded up, and in 1870 the process of mobilisation both in

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numbers the total forces in the field at the time of first contact. In both cases the numbers actually mobilised were considerably greater.

[1] The population of the German States in 1870 was 38,514,046. The estimated population of the German Empire in 1914 was 67,814,000. The population of France in 1870 was 38,067,094 and in 1914 was 39,601,509.

France and Germany was much shorter than it had been in any previous war. But troops cooped up in trains are without any means of defence, they cannot be brought to a battle-field by train, nor can train-loads of supplies be carried safely by rail into the immediate zone of military operations. They had to be unloaded at depots at a safe distance behind the front. There remained then a considerable zone within which men had to march, and their supplies had to be carried as before in animal-drawn vehicles. With the invention of quick-firing rifles and guns the amount of ammunition required had increased greatly, so that at first railways made little difference to the amount of animal transport which armies required, and this requirement still placed a strict limit on the number of men who could be put in the field. The columns of animal-drawn transport could not be allowed to expand indefinitely, since that would have caused such congestion as to make the regular delivery of supplies impossible, and, if the roads in the rear were blocked with slow-moving transport, manœuvre would be confined to a straightforward advance, while retreat would become very difficult. Until the beginning of the twentieth century transportation still imposed a definite limit on the size of armies.

Then came the application of the internal combustion engine to road transport, and with it a further improvement in the number and quality of roads. By the time when the motor vehicle was perfected the number of railways had greatly increased, until the chief European countries had a complete network of rails. The motor lorry could carry from three to four times as much as the horse-drawn vehicle occupying a similar space on the road, and could travel six times as fast.

It could bring up supplies from convenient depots on the railways situated at a safe distance from the front, deliver them to the troops, and return rapidly, leaving the roads behind the armies clear. Transportation had ceased to be a limiting factor in the size of armies.

There remained one difficulty to be overcome before vast armies could be maintained for any length of time in the field. In all wars before the Great War disease had proved to be at least as great a cause of loss as the enemy's bullets and shells, in most of them a greater one. Large bodies of men could not be kept together for any length of time without suffering from some form of epidemic disease. In the South African War more British soldiers died from enteric fever than were killed by the bullets of the Boers. But while scientists of one kind were giving their minds to the solution of the problems of transportation, those of another kind were solving the problems of sanitation and of the prevention of disease, with the result that in the Great War armies of unprecedented size were kept healthy, though the men in the ranks were living under conditions such as human beings had never before been called upon to endure for a like period. Disease instead of being a major became a minor cause of loss, at least in that part of the Great War which was fought in Europe. Thus the second limitation upon the numbers of men who could be maintained in the field disappeared. It was no longer necessary to calculate how many men could be fed and kept healthy at any given time and place; the question became how many men capable of bearing arms were available.

Now the development of railways, motor transport,

and roads and the progress of medical science had not been brought about with a view to war. A few so-called strategic railways had been built for military purposes in France and Germany, and in those countries especially consideration had been given to military needs in designing railway stations and in placing sidings. But the great increase in railways in the latter half of the nineteenth century had taken place to meet the industrial and social needs of the people. Motor transport was adopted by armies after its utility for industrial purposes had been proved. I doubt whether a single scientist or medical man had thought of the application of his discoveries to war while he was working in his laboratory to discover means of lessening the incidence of disease. We come thus to the conclusion that these changes in the nature of war, which made the Great War so different from any wars which had preceded it, were not due primarily to military inventions or methods, but to changes which had taken place in the ordinary life and methods of peoples, changes and developments designed for the purposes of peace.

I have dwelt upon the importance of thinking of war as a great social development, when it concerns vital national interests, and not as a purely military concern, because there is a very natural tendency in a small professional army such as ours, the members of which live very much in a world of their own, for this aspect of war to be overlooked. Speaking for myself, and I do not think I was alone, I am very conscious that I took before 1914 far too narrow a view both of war and of the potential military resources of the British Empire. Most of our forecasts of the probable nature of the Great War now

seem ludicrously wrong. The opinion was general that a great European war must of necessity be short. The financiers could not conceive that society would be able to exist for any length of time without the elaborate and complex machinery of exchanges and credit, which they and their forbears had built up. It was beyond their powers of imagination to conceive of a great modern State destroying its existing currency and creating another, repudiating its debts and yet maintaining its economic existence. Therefore they insisted that the vast cost of a World War would make it of brief duration. The soldiers, with the notable exception of Lord Kitchener, followed their lead and declared that, while the Germans, who surely knew best, were certain that the resources of no State were equal to a long struggle between nations in arms, they for their part were equally certain that human endurance would not long stand the strain of subjection to modern means of destruction. One side or the other would collapse before long.

A Russian writer, M. Bloch, did, in fact, in 1900 predict a war of entrenchments and the deadlock of trench warfare, and this prophecy has been cited as evidence of the unwillingness of the military mind to accept truths even when clearly demonstrated. This particular prophecy of M. Bloch's was made not in the six volumes of his *The War of the Future in its Technical, Economic, and Political Relations*, published in Russia in 1897, but in a conversation with Mr. W. T. Stead, published as a preface to the translation of the last of M. Bloch's volumes.[1] M. Bloch's major conclusion was that war between great Powers had

[1] *Modern Weapons and Modern War*, London, Grant Richards.

become impossible, and he even went on to speak of the war, the probability of which was then in the minds of many: "A war between the Triplice and the Franco-Russian Alliance. It is that war which constantly occupies the minds of statesmen and sovereigns of Europe, and it is that war which, I maintain, has become impossible." [1] This and most of the other prophecies of M. Bloch were falsified by the event. One of the grounds of his conclusions was the increased resisting power of modern fortresses: "It is calculated that to take a modern fortress adequately defended, even with superior forces, is an operation which cannot be put through in less than one hundred and forty days, that is, supposing that everything goes well with the assailants." [2] The Germans opened fire on the forts of Namur on August 21, 1914, and the garrison, except that portion which was in the forts, had retreated by midnight on August 23. On August 25, General von Gallwitz, who commanded the attack, was able to report that with the exception of a few forts on the south-west front the place was in his hands. The bombardment of the forts of Antwerp began on the night of September 27–28, 1914, and this great fortress fell on October 9.

M. Bloch's predictions of the effect of modern weapons were not more fortunate. "The outward and visible sign of the end of war was the introduction of the magazine rifle. . . . In the old days the soldiers saw the puff of smoke, heard the roar of the gun, and when the shell or shot ploughed its way through the ranks, he associated cause and effect, and was to a certain extent prepared for it. In the warfare of the future men will simply fall and die without seeing or

[1] *Modern Weapons and Modern War*, p. xi. [2] *Ibid.*, p. xxxviii.

hearing anything. Experience has proved that the report of a rifle will not carry more than 900 yards, and volley firing not more than a mile. An army on the march will suddenly become aware of the comparative proximity of the foe by seeing men drop killed and wounded without any visible cause . . . you can fairly say that for one mile or a mile and a half the magazine rifle is safe to kill anything that stands between the muzzle and its mark." [1] "In the war of the future," said M. Bloch, "shell which is much less effective than shrapnel will be employed less than formerly. Shrapnel will be the chief weapon of artillery." [2] It is perhaps not surprising that the military critics of his day had some difficulty in making this prediction accord with his prophecy of armies everywhere entrenched.

He conceived Russia as the European nation best capable of enduring the strain of modern war, because "Russia is the only country in Europe which produces enough food for her own people." [3] Russia was, in fact, the first nation to drop out of the war. Similarly he regarded England, because of its dependence upon sea-borne supplies, as incapable of sustaining a prolonged war: "Calculations made by us show that England alone in a prolonged war could obtain the mastery of the sea, forcing the other naval Powers to give way everywhere. But, on the other hand, the interruption of communications at sea would cause the English such great losses as to eliminate the possibility of a prolonged war, even although they were absolutely certain of victory." [4]

M. Bloch would indeed have been unfortunate if

[1] *Modern Weapons and Modern War*, p. xx.
[2] *Ibid.*, p. 9. [3] *Ibid.*, p. lii. [4] *Ibid.*, p. 111.

in a review of war contained in six large volumes he had not made one prediction which proved to be correct, but the conclusion drawn from that prediction proved to be wrong, for M. Bloch conceived of modern war, in the unlikely event of its occurring, as ending in a complete stalemate, because soldiers would not have the courage and endurance to assault trenches. It is at least understandable that in view of M. Bloch's other prophecies, of which I could go on multiplying examples, the military opinion of his time was not greatly impressed by his arguments and conclusions.

The failure to foresee the nature of the Great War was general. Germany, which was militarily the best prepared of the belligerents, had not expected a prolonged war any more than the others. All her plans were based upon a rapid conquest of France, to be followed by a more leisurely progress against Russia. Having knowledge of the number and nature of the Belgian and French fortresses which she would find barring her way, she had made fuller and more complete preparations for siege warfare than had her enemies. So when trench warfare supervened she was to that extent more ready for it, but in the spring of 1915 she, like the others, found herself deficient in the artillery, shells and other munitions which the experience of battles in the trench zone proved to be necessary. Nor was it only in the forecasts of the general nature of the war that the military experts of Europe proved to be at fault. The detailed data upon which their plans and preparations were based proved to be defective.

From the signing of the Treaty of Frankfurt, which ended the Franco-German war of 1870–71, the prob-

ability of the eventual renewal of the struggle had been in the minds of European soldiers. In the two countries chiefly concerned the professional soldiers thought of little else, their whole lives were devoted to the study of the probable nature of the prospective war and the best methods of conducting it. Elaborate and costly systems of espionage were built up in order to obtain information. Germany in particular was credited with knowing everything of military importance which took place in the countries of possible enemies. France, whose very existence was at stake, was believed to be well informed as to the military preparations of her chief enemy. Then, not long before the outbreak of war, came the development of the aeroplane; while rudimentary compared with its present powers, it appeared to be at least sufficiently effective to ensure timely knowledge of the movements of large bodies of troops. It seemed in the summer of 1914 to be altogether incredible that whole armies would be manœuvred in secret.

Yet what happened in August 1914? The French plan of campaign, the famous Plan 17, had been gradually and slowly evolved by the best available military brains of France. It was based upon information painfully collected during a long period. The probability of invasion of Belgium by Germany had for years been a military commonplace. Despite all this, when the invasion actually took place, and the two armies were locked in conflict, the French calculations were suddenly discovered to be erroneous. The whole basis of their plan of campaign was defective because they had under-estimated the strength of the forces which Germany could put into the field in the first line. The French plan was based on information

to the effect that the main German attack would be made from the direction of Metz, and that the Germans had not sufficient troops to extend their right to the west of the Meuse, and at the same time secure their centre and left. The error was not discovered until more than 400,000 Germans had crossed the Meuse, and the capital of Belgium had been occupied. The first news that Germans were marching through western Belgium was indeed received with complacency at French Headquarters, because it was calculated that if the Germans had extended their right so far they must have weakened their centre, which would be broken by the French attack. Not until August 23, ten days after the whole of the German armies in the west, some 1,500,000 strong, had been drawn up on the frontier, was it discovered that the Germans were powerful enough both to repulse the French attacks upon their left and centre and to overlap and envelop the Allied left in great force. Then the elaborately prepared French plan of campaign came tumbling down like a house of cards.

Even more surprising in view of the military omniscience with which the Germans were credited, was their complete ignorance of the movements of the British Army. The British Army was very small in comparison with the conscript hosts of the Continent, and German soldiers were not disposed to rate its military qualifications highly. It is therefore perhaps not astonishing that the German General Staff informed the German Navy that it attached no particular importance to attempts to interfere with the passage of British troops across the Channel. German Headquarters, in fact, regarded the landing of British troops in Belgium as a positive advantage and hoped to take

them and the Belgian Army in their stride towards France. Of that state of mind there is definite evidence, but I may mention incidentally that there is no foundation in fact for the story that the Kaiser described the British Army as "contemptible," and instructed his generals to devote all their energies to its destruction. This is one of those war fictions which has become so firmly established, in England at least, that its demise cannot be foreseen.

If the Germans in August 1914 had no fears of the effect upon their plans of British military intervention on the side of France, everyone with knowledge of the thoroughness and care with which their military preparations were made, anticipated that they would have had more than an inkling of the form that intervention would take, and would have arranged to get early information of the British landing. Now the advanced parties of the British Expeditionary Force landed at Havre on August 9, 1914. By August 17 the whole had disembarked. From August 14 onward our troops began to move forward by rail to their place of concentration behind the French fortress of Maubeuge, and 100,000 combatant troops were there assembled by August 20. For six days hundreds of trains had been conveying them across the north of France. On August 21 the British Army began to march to Mons, which it reached the next afternoon. Yet on August 20, German General Headquarters telegraphed to von Kluck, who was then about to occupy Brussels: "Disembarkation of the English at Boulogne and their employment from the direction of Lille must be reckoned with. The opinion here, however, is that large disembarkations have not yet taken place." So on August 23 von Kluck advanced

on Mons in ignorance that he had in front of him the British Expeditionary Force.

It does not require much research to discover that contemporary opinion during the past hundred years has been almost invariably wrong in its forecast of the nature and outcome of impending wars. In 1815 Napoleon's landing from Elba was regarded as the mad enterprise of a gambler. It seemed inconceivable that a hastily assembled French Army of 130,000 men would venture to invade Belgium against Allied armies of 210,000. When the news of Ligny and Quatre Bras came in, blind confidence was followed by as blind panic. In 1854 the siege and capture of Sevastopol was expected to be an easy task for the Allied French and British armies, and the British Army landed in the Crimea in September without equipment for a winter campaign. In 1861 the general opinion both in the North and in the outside world was that the military resistance of the South in the American Civil War could but be brief. The war went on into 1865. In 1870 the whole military world was amazed at the rapidity and completeness of the German victories. In 1904 military opinion in general was unprepared either for the result or for the methods of the Russo-Japanese War.

These things being so, one cannot but be mildly surprised at the courage and confidence of those who write of the nature of the next war. Surely, if experience is any guide, the one thing that is reasonably certain is that if another great struggle between great Powers takes place it will produce as many surprises as did the last.

It is then unwise to dub as blind fools those who did not foresee the events of 1914–18, but still less

is it wise to consider that the more distant past has no lessons for the future. Many of the great events in history very nearly did not occur, and trench warfare in the form of a complete barrier may be placed in that category. If von Moltke had not in the first week of August 1914 been misled by the reports of victories which came in from his armies; if he had not yielded to political pressure and despatched two army corps from his right wing to East Prussia, which they did not reach until the battle of Tannenberg was ended; if he had been nearer the front and therefore in a better position to regulate the movements of his armies, it is well within the bounds of probability that the battle of the Marne would have been a great German victory, and that there would have been no continuous trench barrier in the west.[1]

If the Allied pursuit from the Marne had been a little more vigorous; if Maubeuge had held out for another twenty-four hours; if the 6th Division from England had reached the Aisne four days earlier, it is again well within the bounds of probability that the Germans would have been forced to carry out a retreat from the Aisne, for which German General Headquarters was already prepared.[2]

[1] On August 25 von Moltke ordered the XIth Corps of his IIIrd Army and the Guard Reserve corps from the IInd Army, which had besieged Namur, together with the 8th Cavalry Division from his VIth Army, to East Prussia. This force was not much inferior in numbers to the British Expeditionary Force. The issue of the battle of Tannenberg, which resulted in a decisive defeat of the Russians, who had invaded East Prussia, was determined by August 28 before the arrival of these troops. Their absence from the Marne and von Moltke's failure to co-ordinate the movements of his armies affected vitally the issue of that battle.

[2] During the German retreat from the Marne to the Aisne in September 1914 there was a gap between the German Ist and IInd Armies. "The VIIth Reserve Corps, released by the

Those who have had most experience of war have been amongst the least disposed to be dogmatic about the future. "I have fought," said Wellington, "a sufficient number of battles to know that the result is never certain even with the best arrangements." The one safe conclusion to draw from the lessons of history is that those who may have to wage war must prepare their minds to deal with the unexpected.

I have suggested that one way in which we may prepare our minds rightly, is to regard war not as the business only of sailors, soldiers and airmen, but, when it concerns a vital national interest, as a great social upheaval which affects every aspect of national life, and calls for the employment of the whole of the national resources in effective combination. I have further suggested that changes which alter materially the social life of peoples tend to change the general nature of war more drastically than do changes in weapons or in the organisation of armies. This gives us some general guide as to the way in which the future of war may be regarded. We are now going through a social change comparable to, and the sequel of, the industrial revolution in the middle of the nineteenth century. The outstanding feature of our age is that every day all of us are coming to rely more

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fall of Maubeuge, arrived in the nick of time on September 13 to stop the gap north of the Aisne. It anticipated the British Ist Corps by a couple of hours only; on this small margin of time did the stand of the Germans on the Aisne depend" (*Military Operations, France, Belgium*, 1914, p. 338). Our 6th Division, delayed by the transfer of the British base from Havre to St. Nazaire, reached the Aisne on September 16. On September 14, German Headquarters telegraphed to their IIIrd Army: "If the Ist Army cannot hold the Aisne Valley, it should retire in good time in the general direction of La Fère behind the river valley. In this case the IInd and VIIth Armies will hold the line Laon–Rheims."

and more upon machinery. Our industries and indeed our personal comfort are more and more dependent upon the factory, and less and less upon the output of human labour unaided by the machine. In the military world a like process is at work. It has for a long time been applied to navies, and the modern battleship is now a mass of intricate machinery enclosed in a steel case. As a result of the experiences of the Great War armies are following the example of fleets. In that war the supply of munitions, and therefore the importance of the manufacture and the supply of material convertible into munitions, attained an importance beyond comparison greater than in former wars. Plans for battle were dependent to a predominant degree upon the number of shells and guns available. This was, of course, largely due to the fact that the existence of the trench barrier allowed ample time for preparation. But one result of the experience gained is that military thought everywhere has been impressed by the fact that the unprotected rifleman, however numerous he may be, cannot produce a volume of fire at all comparable with that produced by the right type of military machine. Armies are therefore going through a process of mechanisation; and whether the particular weapons with which they are now armed survive the test of war or not, it seems certain that changes will take the form of reliance upon other and better machines rather than the development of man-power, unaided by the machine. Man-power will be wanted elsewhere as well as at the front.

Napoleon gave as his recipe for victory the big battalions. He obtained his results mainly by shock power delivered at the right time and place. Power

in modern war takes the form of fire-power, using the term to comprise every form of projectile projected from sea, land or air. To enable that form of power to be sustained, big factories will be as essential as were big battalions to Napoleon. If machines of the right kind and in the necessary numbers are to be produced quickly, and if those machines are to be provided with the immense amount of missiles which they are capable of discharging, then enormous demands will be made upon manufacture. It follows, then, that in any future war those countries which have a highly developed industrial system and control over raw materials convertible into military machines and munitions will be at a great advantage; and further, that of those countries, the one which has given at least as much thought to the mobilisation of its industries as it has to the mobilisation of its armies will be at the greatest advantage. As one of the greatest manufacturing countries of the world, these developments should be all in our favour, provided always that we think of them and apply them in the right way.

Nor is this the only modern development which tends to increase relatively our potential military power. War is still primarily a matter of movement. Even when the deadlock of trench warfare was at its height it was movement between the various fronts which most affected the course of events. The factors of time and space remain the fundamental factors of strategy. Now the outstanding military fact as far as concerns the British Empire is that its potential resources are scattered in every quarter of the globe. Every invention which helps us to conquer time and space therefore tends to make easier not only the

social and commercial union of the Empire, but also the effective employment of its military power. The progress of aircraft and of wireless and of other means of communication promise, therefore, to be of more military benefit to us than to any other Power. I suggest that the whole tendency of modern progress on these lines is in our favour and that we shall use that tendency rightly from a military point of view, and prepare our minds in the right way, if we look beyond our immediate military tasks and think of the resources which progress is making available, and how they may be best used for the purposes of war.

But even if we do this diligently and wisely we must still, all past experience tells us, be prepared for the unexpected. Human imagination is very rarely able to forecast accurately the effect of new developments, and new methods which cannot be fully tested. Tests which will reproduce completely the moral and physical conditions of war are impossible. Therefore we must be prepared for changes in the nature of war in general which have not been foreseen. I am here speaking of the higher conduct of war, of those changes which affect its general development and its strategy. But the same applies to the more detailed conduct of war, to methods of fighting—to tactics.

I have shown that forecasts as to the general nature of almost every war which took place in the past hundred years proved to be incorrect. It is no more difficult to show that on the outbreak of every important war, since the discovery of quick-firing weapons, the tactics learned on the parade ground and at manœuvres have had to be modified on the battle-field.

As the application of science to industry and manu-

facture has developed, so has the power to produce new and more perfect weapons increased; but while the effect of scientific improvements upon the former can be and is thoroughly tested, the complete effect of new weapons cannot be tested in time of peace. "In war," said Napoleon, "the moral is to the physical as three to one," and all later experience of war has served to confirm the truth of that saying. It was not merely, or even chiefly, the effect of the fire of the German heavy howitzers upon the forts of Liége, Namur, and Antwerp which brought about the rapid fall of those great fortresses. We know now that lines of trenches held by resolute men could have withstood attack for a long time without the aid of any forts. The moral effect on the Belgians of the collapse of the defences upon which they had learned to rely, made it seem useless to them to attempt to oppose to an unexpected form of attack an untried form of defence.

A target has no flesh, no blood, no nerves, and tests on the ranges in time of peace are therefore an unreliable guide as to what will happen in war. Jules Verne and H. G. Wells have shown us that human imagination is capable of forecasting with a reasonable degree of accuracy the future development of science. But not even these prophets have been able to foretell accurately the effect of the inventions which they foresaw upon the habits and mentality of the men and women who use those inventions.

We have then to be prepared for the unexpected in war both in strategy and tactics. I have said that, while war as a whole must be regarded as a social development, there is a part of its business which is a science, and a part which is an art. The scientific

part of war is organisation. This tends to become of greater and greater importance, and to be more and more scientific in its nature, but with that part I am not concerned in this book. I propose to deal with that part which is an art, leadership. A leader in war, whether he be a commander-in-chief or a junior officer required to make a decision on the field, can never treat his task as a scientist treats his. He can never proceed forward from ascertained and proved data. Even if he is so singularly fortunate as to have exact information as to the enemy's strength and dispositions, he can never know exactly what is in the mind of the enemy. More often he will be involved in what has been aptly called the fog of war, and have to deal with the unforeseen and the unexpected. He will then be most likely to act correctly if he has trained himself to apply quickly, and even instinctively, correct principles. It will be no use to him to know in detail the history of a score of campaigns, to ask himself what did Napoleon do in 1796, or von Moltke in 1870? But it will be a great deal of use to him to have studied deeply and thought much about two or three campaigns, and so by asking himself what were the conditions under which this or that great captain acted as he did, to have trained his mind to solve a military problem correctly.

Neither is a mere knowledge of the principles of war of any value. It will not help a soldier to solve a problem of war any more than a knowledge of the principles of painting will, without steady practice and natural aptitude, enable an artist to paint a picture. When the time to solve the problem comes, the soldier wants to be able to say as Verdy-du-Vernois said at the battle of Nachod: "To the devil

with history and principles. What is the problem?" But, as Foch says, in order to be able to solve the problem promptly and judiciously, it is necessary to have the confidence which a mind, trained to analyse and form conclusions by an objective study of past experience, gives. The objective study of any art must be based upon principles, therefore, as Foch also says, it is necessary to establish principles of war.

CHAPTER II

PRINCIPLES OF WAR

The principles of the Field Service Regulations—Not strictly principles, but methods derived from experience of great commanders—Clausewitz's principles of war—The principle of public opinion—Consequences of German neglect of this principle—The principle of pursuit—Reasons for its omission to-day—Examples of pursuit by aircraft in Great War—The principles of economy of force and of co-operation—Why the importance of these has increased—Co-operation between policy and strategy—Varied opinions of what are principles of war—Reasons for this—Bacon's theory of sea power—How changed conditions have affected this—Sea power could not limit our liability in 1914—The division of war into limited and unlimited pedantic—Increased power of effective blockade—Effect of aircraft on method of obtaining object of war—Effect of changing political conditions—War as the continuation of policy—Effect of Covenant of the League of Nations and Kellogg Pact on this—The principles of war not rigid—Natural qualities indispensable to leadership—But can be developed by study—This study must be objective—Peculiar conditions of British Empire—Therefore these principles will be considered from British point of view.

The Field Service Regulations, Part II, are concerned with the military principles of war and their application. Since war is not the concern of soldiers only, its principles have a wider than a purely military application. In particular the choice of the object of war is a matter for which the Government is chiefly responsible, for the object must as far as possible be chosen so that national power and not merely military power can be applied. The Field Service Regulations

do not include, therefore, the principle of the object amongst the military principles of war, but regard it rather as a general over-riding principle affecting each and all of these.[1]

The military principles which are enumerated in the Field Service Regulations are:

The principles of—

(i) Concentration,
(ii) Economy of force,
(iii) Surprise,
(iv) Mobility,
(v) Offensive action,
(vi) Co-operation,
(vii) Security.

It has been objected that many of these are not, in fact, principles. Murray's Dictionary defines a principle, in this sense of the word, as either "a fundamental truth or proposition upon which many others depend," or as "a general statement or truth forming the ground of or held to be essential to a system of thought," or as "a general law or rule adopted or professed as a guide to action." The last of these definitions is that which most nearly fits these principles of war, but it has to be stretched considerably to make it do so. Strictly speaking, surprise, mobility, offensive action, co-operation and economy of force are not principles. They are methods by which certain results can be obtained. Military terminology has never pretended to be scientifically exact, and as long as we know what we mean when we talk of principles of war it is not necessary to be pedantic in the use of terms. Napoleon said, "The principles of war are those which

[1] F. S. Regs., II. 7. 2.

guided the great commanders whose great deeds have been handed down to us by history," and the modern conception of principles of war may be dated from that definition. They are, therefore, not principles but methods which, as experience has shown, lead most surely to the achievement of the object of war.

Clausewitz, the father of modern strategical study, writing in the early nineteenth century, enumerated certain principles of strategy. While the terms he uses differ somewhat from those employed in our Field Service Regulations, his principles include those of the object, the offensive, concentration, mobility and surprise.[1] He does not include economy of force and co-operation as principles, though he stresses the importance of these methods in other parts of his work on war. While he omits these two he adds two others: to gain public opinion, and to follow up success with the utmost energy, which we may summarise as the principle of the pursuit.

In my judgment Clausewitz is right in including the gaining of public opinion, by which is meant the gaining of the sympathies not only of our own people, but of the world in general, amongst the principles of war. If we take a broad view of the events of 1914–18 it will, I think, be seen that it was neglect of this principle by the leaders of Germany which, more than any other error, either of commission or of omission, brought about the defeat of their country. The invasion of Belgium by Germany in August 1914 brought her great military advantages. As I have pointed out in the previous chapter, it might, but for some avoidable errors, have led to a German victory on

[1] Von Clausewitz, *On War*. Summary of the instructions given by the author to His Royal Highness the Crown Prince, III. (i).

the Marne in September, and it carried the war into the heart of France, caused immense loss to France and Belgium both by devastation and by depriving those countries of valuable resources, and to a great extent imposed upon Germany's enemies the strategy of the war. The opening paragraphs of the instructions which Lord Kitchener issued to Sir John French, the Commander-in-Chief of our first Expeditionary Force, ran:—"Owing to the infringement of the neutrality of Belgium by Germany, and in furtherance of the Entente which exists between this country and France, His Majesty's Government has decided, at the request of the French Government, to send an Expeditionary Force to France, and to entrust the command of the troops to yourself.

"The special motive of the force under your command is to support and co-operate with the French Army against our common enemies. The peculiar task laid upon you is to assist the French Government in preventing or repelling the invasion by Germany of French and Belgian territory, and eventually to restore the neutrality of Belgium, on behalf of which, as guaranteed by treaty, Belgium has appealed to the French and ourselves." In other words, we from the first conformed to the action of the Germans, who by invading Belgium obtained the initiative. Great as the military advantages were which Germany thus gained, they were in the event more than annulled by the fact that the invasion of Belgium brought the British Empire united into the war and from the first tended to influence world opinion against Germany.

In 1917 the declaration by Germany of unlimited U-boat warfare brought Great Britain within sight of the exhaustion of her food supplies. But before that

state of affairs had been reached, Germany's action had brought the United States into the war and had still further exacerbated neutral opinion. Mr. Churchill's comment upon the mentality of German leadership in this affair is just:—"Of all the grand miscalculations of the German High Command, none is more remarkable than the inability to comprehend the meaning of war with the American Union. It is perhaps the crowning example of the unwisdom of basing a war policy upon the computation of material facts alone. The war effort of 120,000,000 educated people, equipped with science and possessed of the resources of an unattackable continent, nay, of a New World, could not be measured by the number of drilled soldiers, of trained officers, of forged cannon, of ships of war they happened to have at their disposal. It betokens ignorance of the elemental forces resident in such a community to suppose that they could be permanently frustrated by a mechanical instrument called a U-boat. How rash to balance the hostile exertions of the largest, if not the leading civilised nation in the world against the chance that they would not arrive in time upon the field of battle. How hard to condemn the war-worn, wearied, already out-numbered, heroic German people to mortal conflict with that fresh, mighty, and, once aroused, implacable antagonist!" [1]

In our own case the problem of the enforcement of our blockade of Germany consisted in holding a nice balance between the material results to be obtained from the strict application of blockade and the effect of that blockade upon neutral trade and through it upon neutral opinion. There have been many critics

[1] Churchill, *The World Crisis*, 1916–18, p. 226.

of our slackness in applying the blockade to Germany, but most of these have overlooked or minimised the political aspects of the problem. Our blockade did eventually bring Germany to the verge of starvation, and this result was achieved without bringing, through it, a single neutral Power into the war against us, while the most important of those neutral Powers whose trade was affected by our blockade, the United States, came into the war on our side. Therefore it may be said confidently that our application of the principle of gaining public opinion and Germany's neglect of that principle had a determining influence upon the issue of the war. The influence of this principle upon the conduct of war is likely to be even greater in the future than it has been in the past. The unlimited use of submarines, of poison gas, and of bombing aircraft is likely to extend greatly the sufferings of war amongst the non-combatant population, and the effect of such action upon public opinion must in prudence be carefully weighed before resort is had to it. This is a question to which I will return later.

Clausewitz's inclusion of the principle of gaining public opinion amongst his principles of strategy follows naturally from his definition of war as a development of social life, as a human activity which should not be considered apart from its influence on men and women in general. Foch evidently had a similar conception of war when he wrote :—" Far from being an exact science, war is a dreadful and impassioned drama." [1] That being so, it is, as Mr. Churchill says, the height of unwisdom to base a war policy upon material factors alone. In every aspect and part of war the moral factors are of supreme importance, and

[1] Quoted by Foch, *Principles of War*, p. 3, from Jomini.

whether we decide to include the gaining of public opinion amongst our principles of war or not, it is an object which both statesmen and soldiers must have constantly in mind. Being one with which both are concerned, it, like the principle of the object, is not a purely military principle of war, and is for that reason, I take it, not included in the principles of the Field Service Regulations.

I have said that Clausewitz includes in his principles of strategy one other which is not contained in the list of principles of our Field Service Regulations—the principle of pursuit. Henderson, in his chapter on Strategy in the *Science of War*, also makes this a principle of war. After a general survey of the principles of strategy he goes on:—"Lastly, there are two great principles which are the foundation and the crown of all strategical methods, and which strike heavily and directly at the moral of the hostile commander and of the troops he commands. They have been defined for us by Stonewall Jackson.

> (i) Always mystify, mislead and surprise the enemy.
>
> (ii) Never give up the pursuit so long as your men have strength to follow, for an army routed, if hotly pursued, becomes panic-stricken, and can be defeated by half their numbers. To move swiftly, strike vigorously, and secure all the fruits of victory is the secret of successful war." [1]

Clausewitz was writing with the memories of the Napoleonic wars still in his mind; Henderson was thinking of his studies of the American Civil War of 1861–65. But it is not possible to find in the history

[1] Henderson, *Science of War*, p. 42.

of war between great Powers, from 1870 until near the end of the Great War, a single example of a decisive pursuit, as, for instance, Napoleon's pursuit into Prussia after the battle of Jena was decisive. The reason for this is, that since the invention of quick-firing weapons the moral and physical strain of battle has increased enormously, and the delaying powers of small bodies of troops have increased to a like extent. After the battle of Le Cateau in August 1914, the fact that some small bodies of our infantry were left accidentally in the fire trenches, because the order to withdraw did not reach them, sufficed to check the pursuit of the Germans. Troops who have been engaged in a prolonged attack have rarely much energy left and are easily stopped by a few determined men. Therefore the experience of modern war justifies the compilers of Field Service Regulations in omitting pursuit from the principles of war and in saying of pursuit in general: "The exhaustion both of personnel and material at the end of a protracted battle will limit the extent to which troops previously engaged will be able to continue the advance, and the immediate pursuit must be undertaken by the mobile troops and aircraft, while the remainder of the force is being re-formed and re-organised." [1]

The time required to re-form and re-organise allows the enemy time to constitute rear-guards and to oppose sufficient resistance to enable him to evade destruction. That represented the prospect of pursuit during the Great War until near its end. But in its last weeks there occurred two events which give an indication that pursuit may again be restored to the position in which Clausewitz placed it. On September 19, 1918,

[1] F. S. Regs., II. 76.

when Allenby's attack had pierced the Turkish lines, the VIIIth Turkish Army was retreating down a valley leading to Messudieh Junction. Our aircraft used bombs and machine guns with deadly effect upon the troops and transport crowded in a defile, soon blocking the road and creating confusion and demoralisation in the Turkish ranks. On September 21st the residue of the VIIIth Turkish Army and the greater part of the VIIth was retreating from Nablus through a precipitous gorge. Soon after dawn a long column of troops, artillery and transport was seen by our airmen winding its way down the gorge, and for four hours they kept up an attack upon the Turks pent up within it. Next day ninety guns, fifty lorries and about 1000 other vehicles were found deserted in the gorge, which was strewn with dead Turks and animals; the survivors had fled in disorder into the hills.

On October 27, 1918, in the final stage of the battle of Vittoria Veneto on the Italian front, pursuit by aircraft had an equally disastrous and demoralising effect upon the Austrian forces. It would appear then that in the future an army which has driven another army from a battle-field and is in possession of a superior air force may hope to make pursuit even more rapidly effective than it was made by Napoleon, and that once again the issue of a single battle may be decisive of a campaign.

So much then of the two principles, public opinion and pursuit, included by Clausewitz and omitted from our Field Service Regulations. Now of the two included in the latter and omitted by Clausewitz. These are economy of force and co-operation. While, as I have said, he does not elevate either to the rank of a principle of strategy he treats them as one and the same element

of successful leadership. He says: "We look upon the constant watching over the co-operation of all forces, or in other words of keeping constantly in view that no part of them should ever be idle, as one of the characteristics of leadership. Whoever has forces where the enemy has none does not give them sufficient employment, whoever has part of his forces on the march, that is, allows them to lie dead, while the enemy's forces are fighting, is a bad manager of his forces. There is there a waste of forces which is even worse than their employment to no purpose. If there must be action then the first essential is that all parts act, because even purposeless activity still keeps a portion of the enemy's army employed, whilst troops completely inactive are for the moment quite neutralised." [1] This is a narrow view of what we understand to-day by economy of force and co-operation. But Clausewitz, like every other writer upon war, was influenced in his opinions by the circumstances of his time. Foch, who puts the principle of economy of force first of his principles of war, says of it: "The necessity for this principle was felt from the outset of the wars of the Revolution—because national wars deal with large numbers. One must not assume, however, that it arose suddenly, magically from the compelling nature of circumstances, nor that it was immediately understood and faithfully applied." [2] The statement that it was first necessary to make economy of force a principle of war when armies became large sounds strange till it is examined. It is then seen that it is in truth far more difficult to ensure that all the parts of a large

[1] Clausewitz, *On War*, Book IX. chapter xiv.
[2] Foch, *Principles of War*, p. 51.

army work in co-operation, and that they all exert their full effect, than is the case when armies are small. Indeed, as the history of the Great War shows, when military resources are large, the temptation to indulge in dispersion and to use part of these resources for ends which prove to be uneconomical of force is very great. To this point I will return.

Similarly, the necessity for stressing the importance of co-operation has grown with the increased complexity of modern armaments. We must not regard co-operation, even from a purely military point of view, as being sufficiently attained when it is understood and practised by all the parts of an army. From the point of view of the British soldier, true co-operation for the purposes of war means not only that, but also the most effective co-operation between air, sea and land power. Nor will even that high degree of co-operation suffice. The greater part of Clausewitz's first book is devoted to showing not only that war is a social development, but also that it is a political act, and cannot be isolated and handed over to soldiers and sailors to deal with. He insists again and again on the vital importance of the effective co-ordination of policy and strategy. The need for that co-ordination and the difficulties of obtaining it have increased greatly with modern political and military developments.

I have referred in the first chapter to the growing importance of industry in war, and to the fact that we found in the Great War that heavy calls were made upon every form of national activity. It follows that the importance of effective organisation for the higher direction of war is greatly increased. The difficulty of ensuring co-operation between the political and the

military direction of war became very apparent in the Great War. In most of the European countries the soldiers and the statesmen were, at one time or another, at loggerheads. It is the business of professional sailors, soldiers and airmen to think about war, but with rare exceptions they are ignorant of statecraft. Those whose business it is to think of statecraft, particularly in countries with a democratic system of government, are usually far too occupied with the daily demands of the political situation to give regular and consistent thought in time of peace to an eventuality which may never arise. The causes of friction in time of war, necessarily a time of stress, exist in most countries, and in most countries the trend of political development tends to increase them. But unless and until war as a means of settling international disputes is abolished, the causes of friction must be removed if war is to be conducted successfully and with the minimum of loss.

The developments which I have indicated as probable make the part of policy in war of greater importance than ever. Organisation for war now means not only the organisation of armies and navies, but the organisation of the resources of the State. When war comes the correct allocation of those resources is a matter of supreme importance. The proper direction of industry may well be as vital as good generalship; the correct distribution of man power between the demands of armies and navies and the demands of industry will call for the nicest consideration. The Great War showed us over and over again how supremely difficult it was for the statesman to guide wisely, without ill-considered interference in the technical spheres of the soldier and sailor. So long as the possibility of war remains, statesmen must learn

that their part in its conduct will in future be even more difficult than it has been in the past. The correct co-ordination of policy and strategy is more than ever the key to the successful conduct of war. For all these reasons we cannot be wrong in making co-operation one of our fundamental principles of war.

From what I have said it will be seen that the claim advanced by most writers upon war, that its principles are immutable, cannot be accepted literally. We find indeed that there is little agreement as to what these principles are. Neither Jomini nor Hamley, who was of his school, enunciates any general principles of war or of strategy. They confine themselves to describing and discussing various forms of strategical manœuvre. Von der Golz, writing in 1895, recognises in his *The Conduct of War* only two principles of strategy, the principle of the object and the principle of concentration. Foch in his *Principles of War* mentions four, which he calls the principle of economy of force, the principle of freedom of action, the principle of the free disposal of forces, and the principle of security, while hinting that there are others which he does not mention. Henderson in *The Science of War* refers to the principles of concentration, surprise and pursuit, and regards mobility and economy of force merely as means of applying the principle of concentration. Colin, in *Les transformations de la guerre*, published in 1912, describes the principles of Napoleonic war as including those of the object, security, concentration, the offensive, mobility and surprise. Colonel Fuller, in his *Reformation of War*, published in 1923, gives the eight principles which first appeared in Field Service Regulations in 1924.

There is greater agreement between the principles of

Clausewitz, of Colin, of our Field Service Regulations and of Colonel Fuller than between any other sets, but even here there are important variations. There are, however, two principles of war which are unanimously accepted by all writers upon war of the past, namely, that the object of war is to be obtained by the overthrow of the enemy's armed force, and the way to bring about that overthrow is by the concentration of superior strength, physical and moral, upon the field of battle. Certain writers, as I have shown, confine themselves to these two principles. Some of the others regard certain methods of applying these principles as of such importance as to be elevated to the rank of principles, while others again keep them in the category of methods. We shall find some guidance through what appears to be confusion, if we remember that all these so-called principles are, in fact, methods which have been established by the practice of the great commanders, and that changes in conditions alter the relative importance of some of these methods. For example, as I have pointed out, there was nothing to be gained by making pursuit a principle of war when a decisive pursuit had become so difficult as to be almost impossible. But, since an effective pursuit of an enemy from a battle-field is the surest means of completing the destruction of his armed forces, we may well find that when and if such pursuit again becomes practicable, pursuit will once again be a principle of war. Similarly, the expansion in the size of armies, which took place between 1870 and 1914, increased the importance of economy of force and of co-operation to an extent which has caused modern writers to include them amongst principles of war, while their predecessors left them in the category of methods.

Bacon, in his essay on the "Greatness of Kingdoms and Estates," defines a number of principles of war: "Walled Towns, Stored Arcenals, and Armouries, Goodly Races of Horses, Chariots of Warre, Elephants, Ordnance, Artillery, and the like. All this is but a Sheep in a Lion's Skin, except the Breed and Disposition of the People be stout and Warlike. Nay Number (itself) in Armies, importeth not much, where the people is of weak Courage." This is put in more official language by the Field Service Regulations, which say: "Success in war depends more on moral than on physical qualities. Neither numbers, armament, resources nor skill can compensate for lack of courage, energy, determination and the bold offensive spirit which springs from a national determination to conquer." Insistence on the importance of morale in war does not date from Napoleon, nor insistence on the importance of sea power from Mahan. For in the same Essay Bacon says: "We see the great effects of Battailes by Sea. The Battaile of Actium decided the Empire of the World. The Battaile of Lepanto arrested the Greatness of the Turk. There be many Examples where sea-fights have been Final to the warre; But this is where Princes or States have set up their Rest upon the Battailes. But thus much is certaine; That he that commands the Sea is at great liberty, and may take as much or as little of the Warre as he will. Whereas those that be strongest by land are many times neverthelesse in great straights. Surely, at this Day, with us of Europe, the advantage of Strength at Sea (which is one of the principall Dowries of this Kingdom of Great Brittaine) is Great." This is an interesting illustration of how changed conditions affect the applicability of the principles of war.

There is no example in modern history of a naval action being decisive of a war. Leipzig and Waterloo were needed to supplement Trafalgar. It is possible that, if on May 27, 1905, Rozhdestvensky had defeated Togo in the battle of Tsushima, the result might have been decisive of the issue of the Russo-Japanese war, for the Russians would then have commanded the sea communications between Japan and her armies in Manchuria. It is also possible that if the Germans had defeated our Grand Fleet decisively in the battle of Jutland we should have lost the war, for German submarines even without the support of a victorious fleet gravely endangered our supplies of food. In both these cases the country which ran the gravest risks was an island Power, but in no case in modern history has a continental Power been overcome by action at sea alone.

But the truth of Bacon's principle, " that he that commands the Sea is at great liberty, and may take as much and as little of the Warre as he will," has been even more affected by the changes which have taken place since his time than the truth of his opinion of the effect of sea battles. This principle long held sway with us, and there were many who had faith in it even as late as August 1914. These persons believed that if we supported our Allies with our powerful fleet and our financial aid, our military contribution to the war need not be considerable, in other words, they held that we might have as much or as little of the war on land as we would. The idea was very general in 1914 that for us the war could be one of limited liability. But it very soon became apparent to the most ardent believers in the efficacy of sea power that times had changed. What Bacon said in the sixteenth century

was true of an island kingdom with few overseas possessions and washed by seas which at their narrowest were then of sufficient width to defy control by any Power which had not command of the sea. But it was not true in the twentieth century, when submarines based on the French ports of the Channel coast and backed by German guns established on the French coast could have made it very difficult to feed London. Our vitals had thus in process of time extended from our shores on to the continent of Europe, and to defend them we had to expend our utmost efforts. Though from the first we had command of the sea to the extent that we could always ship troops and supplies to any part of the world to which we desired to send them, we could not for that reason make the war one of limited liability.

Corbett, in *Some Principles of Maritime Strategy*, devoted considerable space to an elaboration of Clausewitz's theory of absolute and limited wars, and divided war into the two categories of limited and unlimited war. But the increased dependency of all great nations upon seaborne trade and the increased complexity of international relations makes this division, which, as we see, dates from Bacon, to-day somewhat pedantic and even dangerous. Small wars between great nations and uncivilised or semi-civilised tribes on or near their borders will still occur, but these are of the nature of police operations on a large scale. It is imprudent for a great Power to regard any other kind of war as capable of definite limitation, since its developments and repercussions in the interests of other nations cannot be foreseen.

On the other hand, this same increase in dependency on dealings with other nations has greatly increased

the power of blockade, when it can be made effective, and it may well happen that a nation or group of nations, which has been declared an outlaw by the League of Nations under the terms of Article 16 of the Covenant of the League, and from which all communication by sea and land with other nations is shut off, may by that means be forced to surrender without employing any other form of military action.

Even the two fundamental principles of war upon which in the past there has been general agreement, those of the object and of concentration, have to-day been challenged. There has been until recently no difference of opinion as to the way in which the object of war could be most surely attained, namely, by the destruction of the enemy's armed forces. There was no hesitation in declaring that the way to achieve this object was by the concentration of superior power at the right time and place. The writers of the past could not conceive of any other way of obtaining the object of war. Now it is pointed out that the destruction of the enemy's armed forces is, in fact, only a means to an end, the end being the restoration of peace on the most favourable terms. War being a political act, its object is to be obtained by forcing the enemy nation to change its policy, which can be done by overcoming the will of its people to continue fighting. It is now claimed that the will of the enemy people can be overcome by other means than by destroying their armed forces, and that by means of aircraft the horrors of war can be brought home to the civil population to a degree which will make them abandon the struggle even while their armies are undefeated. This is a claim which I propose to examine when I come to consider the object of war, but the mere fact that it is

seriously advanced is a further demonstration of the fact that material changes do affect not merely the methods of applying principles of war, but the applicability of the principles themselves.

Nor is it only changes in material conditions which affect the principles of war. A like change has been caused in our time by changes in political conditions. The principles of Clausewitz which I have hitherto quoted he calls principles of strategy, but he also enunciated a principle of war in general when he said that "War is not merely a political act, but also a real political instrument, a continuation of policy carried out by other means"; [1] and again: "war is nothing but a continuation of policy, with an admixture of other means." His object was to make it clear that "war is by no means an independent thing in itself." [2] This principle was taken up and elaborated by Clausewitz's followers, and it became an established doctrine of war, not only in Germany, but in the continent of Europe generally, that "war is the continuation of policy." It was eventually interpreted as meaning that the function of the State was to decide on the policy which was in its best interest, to be strong enough to enforce that policy, and in the last resort to use war to carry it through. Writing in 1909, Admiral Freiherr von Maltzalm put this view bluntly when he said: "War has for its aim to compel peace upon our conditions. Armed peace aims at preparing the means for war in such strength and in such a state of readiness that the enemy, the State with whose interests our interests conflict, will remain at peace under our conditions." The recent history of Germany appeared

[1] *On War*, Book I. chap. i. p. 24.
[2] *Ibid.*, Book VIII. chap. vi.

to support this application of Clausewitz's principle. On three occasions, against Denmark in 1864, against Austria in 1866, and against France in 1870, Bismarck had used war in the process of building up the German Empire, and the creation of that Empire had been followed by an almost unexampled development of Germany's trade and industry. It is therefore not surprising that the doctrine that war is the continuation of policy received wide acceptance, particularly in Germany. Even after the Great War we find that when von Hindenburg and Ludendorff were called upon to make a statement before the German commission of inquiry into the responsibility for the war, they began by saying: "The German General Staff is based upon the teachings of the great war philosopher Clausewitz. Accordingly, we look upon war as nothing but the continuation of politics." [1] But ultimately armed peace as described by Freiherr von Maltzalm became more and more intolerable. The world in general could not permit any Power or group of Powers to become so strong that it could dictate its will to the remainder, while the Great War proved that in a life and death struggle between great nations even the victors lost materially more than they gained. There has, therefore, been a revulsion against the doctrine that war is the continuation of policy. The preamble of the Covenant of the League of Nations recites that the members of the League agree to the Covenant: "In order to promote international co-operation and to achieve international peace and security by the acceptance of the obligation not to resort to war."

The Pact of Paris of 1928, more generally known as

[1] Official German documents relating to the World War, Carnegie Endowment, Vol. II. p. 862.

the Kellogg Pact, has as its first article: "The High Contracting Parties declare in the names of their respective peoples that they condemn recourse to war for the solution of international controversies, and renounce it as an instrument of national policy in their relations with one another." This Pact was signed by Germany, the United States, Belgium, France, the British Empire, Italy, Japan, Poland, Czechoslovakia, and has since been accepted by a large number of other States.

Now it is true that many solemn pacts have been violated in the past when they appeared to conflict with national interest, and there is no guarantee that they will not be broken in the future. It is equally true that neither the Covenant of the League of Nations nor any international pacts, either severally or in combination, have yet succeeded in eliminating the danger of war. The mere fact that navies, armies and air forces are still maintained at great cost is sufficient evidence of that. Yet it is foolish to ignore the Covenant of the League of Nations and the several pacts which have been made since the Great War because they cannot at once fulfil all the claims of their most enthusiastic supporters. They have radically changed the conditions which govern international relations, and therefore the conditions which govern war. For Clausewitz was undoubtedly right when he said: "The art of war in its highest forms is policy, no doubt a policy which fights battles instead of writing notes." [1] World opinion is unquestionably disposed to-day to support the fulfilment of international engagements, and, as I have pointed out, the history of the Great War shows clearly the danger which flouting

[1] *On War*, Book VIII. chap. vi.

world opinion involves. No great Power, no General Staff, will henceforth openly assert that war is a continuation of policy in the sense in which that phrase was interpreted in Germany. Therefore as a principle of war it is dead. None of which alters the fact that war is a political act. As no British Government which has been in power for the last hundred years has ever contemplated war as the continuation of its policy, which to some extent accounts for the fact that war has usually found us unprepared, we have every reason to welcome a change which promises to put us more on an equality with other nations.

The general conclusion to be drawn from all this is that there are no fixed laws and rules of the art of war, and that even its principles are fluid and require constant re-examination in the light of the changes which time brings. It cannot be said that the principles of war in any particular list are immutable. No such claim is made in our Field Service Regulations. It is, however, true to say, since we find that there are certain methods common to all the great commanders from Hannibal to Foch, that there is an established and permanent basis of experience from which certain general principles of war, applicable at any given time, can be deduced. The inclusion or exclusion of principles from any particular list depends, as we have seen, partly on whether we are considering war in general, or whether we are concerned only with its military aspect. It depends also upon the conditions of the time, since these affect the relative importance of the principles and change their values. The principles of war are not, therefore, to be regarded as the items of a recipe, which if properly compounded will produce victory, but as guides to help us to train our minds

to deal with the problems of war in the right way. Because this is so, any pedantic adherence to theory and formulæ, the truth of which past experience appears to have established, has usually proved to be fatal in war. Because man has never been able to forecast accurately the conditions of future war, the unexpected is the rule of war. Because this is so, no amount of thought and study will make a man an efficient leader in war, if he has not the natural qualities of leadership. Because this is so, many men, who have possessed those natural qualities have shown themselves to be, in the past, good leaders in war even without any profound study of its art. Clausewitz was right when he said at the end of his three volumes *On War*, which are still to-day the best general study of its art: "If any special faculty of the understanding, besides a practised judgment, is required, it is clear, from all that precedes, it is a talent for artifice and stratagem. The exact contrary has been maintained, but merely from a misplaced feeling of awe regarding the subject, or from the vanity of authors who have written on it. An impartial consideration must convince us of this, but experience tends to impress on us this conviction still more forcibly. In the late war [1] many men made themselves conspicuous as skilful generals, often as generals of the first order, without having had the benefit of any military education. As regards Condé, Wallenstein, Suwarow and many others, it was at least a very doubtful point whether these had enjoyed any either." [2] We can to-day add many other names to that list, but we can also add many more names, from Napoleon to Foch, of men

[1] The war, of 1814.
[2] *On War.* Summary of Instruction IV.

who have improved their natural gift for leadership by thought and study. Further, as the complexity of war has increased, and it has increased greatly since Clausewitz's day, the need for study in order to form a practised judgment has increased. Here, again, the experience of the past has been modified by changed conditions. For this reason the study of war has been encouraged and systematised in all great nations. No one can to-day acquire the technique of an expert general staff officer, and very few even of those with the greatest natural gifts can become efficient leaders of men, without training and study. The judgment required to deal correctly with the unforeseen and unexpected can be acquired and practised in time of peace, partly through the experience of manœuvres, partly by examining the experience of the past by the light of the conditions of the present. As Foch says, all such study should be objective. The study of war in the abstract is of very little value, once we have used it to clear our minds as to its general nature. Now the objective study of war presents to the British soldier very different problems from those which confront the soldiers of any other country, because the geographical and political conditions of the British Empire are unique. In the past we were somewhat inclined to forget that important fact and to allow ourselves to apply dogmatically the theories and ideas of continental writers, who were naturally influenced by the conditions not only of their times but also of their countries. Much as Clausewitz and Foch have to teach us, we find that Clausewitz is thinking exclusively of war upon the Continent, and Foch evidently wrote with his eyes upon the eastern frontier of France. Neither mentions the sea. It was a common experience during the Great

War to find even the more instructed of our Allies ignorant of matters concerning the sea, and sea power, which we took for granted. Our military problems are like those of no other country. Therefore I propose in the following chapters to deal with the principles of war enunciated in the British Field Service Regulations from a point of view which is frankly British, and takes into account their relation to the political and geographical conditions of our Empire. In the Field Service Regulations these principles are given necessarily a purely military application. I propose to give them a wider application, for we must, I suggest, think of war undertaken for a vital national interest, not as the business of any one service, nor even of the fighting services alone, but as requiring the application of national power to achieve a specific object. If we learn to think rightly of the major problem it is easy to adjust our minds and ideas to the lesser.

CHAPTER III

STRATEGY

The elements of military strategy—Hamley on the elements of strategy—Our dependence on the sea makes broader view of strategy necessary—Effect of air power on strategy—Examination of claims made for air power—Influence of air power in small wars—and on conditions of time and space—Effect of attack by aircraft on enemy's communications—Naval, military and air strategy not to be regarded as separate—The political element in strategy—Strategy is art of applying national power—Development of our higher organisation for conduct of war in accordance with this definition—The sub-committee of the three chiefs of staff—War concerned with men—Its art not stationary—Examples of changes in strategy between days of Napoleon and of the Great War.

The principles of war are applied both by means of strategy, which is usually defined as the leading of troops up to the time of contact with the enemy, and by means of tactics, which are the methods of employing troops in contact with the enemy. It is with the former that I am concerned. Now the leading of troops in accordance with the principles of war up to the time of contact depends mainly upon three factors. These are the relation of the positions of the base and the lines of communication to the positions of the opposing armies, the conditions of time and the conditions of space.

An army draws all that it needs in food and material from its base along its lines of communication. The

protection of these is therefore vital to its existence, and all forms of strategical manœuvre are influenced to a greater or lesser degree by this fact. Two armies may meet while each is covering its communications directly and effectively. Battle then takes the form of a head-on collision, which is the simplest, most brutal and least skilful form of manœuvre. Again, one army may be extended in order to cover its communications and may be attacked by the other, also covering its communications, but concentrated. The latter may then break through the opposing front, and either defeat the divided parts in detail, or force them away from their communications. One army may be drawn up obliquely to its communications, or even have its front parallel to them, while the other covers its communications more directly. One army or group of armies may converge from a broad base or from a number of bases against an opposing army the bases and communications of which are centrally placed in relation to those of its enemy. In the former case the army is said to be operating on exterior, in the latter upon interior lines. Put in the simplest language, the object of strategical manœuvre may be either to break through the enemy's front, which is called penetration, or to envelop one or even, if in very superior strength, both of the enemy's flanks, which is called envelopment. In every case the object is to bring the army to the battle-field in such a way that the result of fighting —that is, of tactics—may be as decisive as possible.

All the various combinations and permutations of these various manœuvres are described by Hamley in his *Operations of War*, and are there richly illustrated by examples from military history. Of strategy in general he says: "It is the object of strategy so to direct the

movements of an army that, when decisive collisions occur, it shall encounter the enemy with increased relative advantage. If two armies advance towards each other till they meet, both equally covering their own communications and equally ready to concentrate for action, it is evident that strategy has no share in the result, for all that has been done is to bring them face to face, and leave to force or tactical skill to decide the issue. But when the movements of one of the armies have been so directed as to increase the chances in its favour, by forcing the enemy either to engage at a disadvantage, or to abandon territory under penalty of worse disaster, there is proof of a power which differs from the mere ability to fight." He sums up the objects of the numerous strategical manœuvres, which he describes as:

"1st, To menace and assail the enemy's communications with his base.

2nd, To destroy the coherence and concerted action of his army by breaking the communications which connect the parts.

3rd, To effect superior concentration on particular points."

He adds that whichever mode of manœuvre a general may adopt he must always maintain his communications with his base.[1]

This is ground common to all writers on strategy, and from it will be seen how great is the influence of communications upon strategy. I have already pointed out, as indeed is obvious, that the British Empire is unique. We are the only island race with immense and widely scattered responsibilities. We can

[1] *Operations of War*, Hamley, 1907 edition, p. 65 *et seq.*

only wage war on land without moving troops by sea, either to repel an invader who has landed on our shores, which is happily at present, owing to the dominance of our navy in home waters, one of the least probable forms of war, or in India, where the Indian Government maintains forces of sufficient strength to carry out minor campaigns without assistance from home. Further, ever since the industrial revolution of the middle of the nineteenth century we have had to draw from overseas much of the food needed by the people of Great Britain, and of the raw materials required for our industries. Therefore we are dependent upon sea power not merely for the movement of troops and for keeping them supplied with their needs, but also for the security of the home base. All this is well known, but the deduction to be drawn from it has never, to my knowledge, been clearly stated. It is that we at least should not think of strategy as being concerned only with the movements of armies on the land and the security of land communications. For us this business of strategy is normally inextricably involved with the movement of troops by sea and the security of sea communication. Even in wars when the movement of troops by sea has been so easy and the security of sea communications so certain as to seem hardly to need consideration, as, for example, in the South African War, the factor of sea power has materially affected our strategy on land. In that war we were able to make any and all of the ports of the Cape Colony and Natal our bases, to move troops at will from the Cape to Natal and vice versa, and our military history teems with examples of the advantage which this liberty has conferred upon us. Both we and our forbears have been accustomed to think of our

military power as amphibious, but I venture to suggest that the chief criticism which our descendants will have to make of our conduct of the Great War will be that we did not make the best use of our amphibious power, and in fact we first turned ourselves voluntarily into a land power, and began to think of our amphibious power afterwards. The prime reason for this seems to have been that under the influence of continental military thought, which was very little if at all concerned with sea power, we learned to put naval and military strategy into separate dockets, and to think of them as things apart save when the occasion arose for a combined naval and military operation.

The need for thinking of strategy as concerned with something more than the movement of armies on land has been accentuated by the rise of a third fighting service. The Royal Air Force is needed both by the Navy and by the Army, and it has the power to act independently of either. If there are few military operations in which the Army can be engaged without recourse to ships, there are none in which it will not require the co-operation of the Air Force in one form or another. No sensible person would therefore attempt to think to-day of the movement of armies on land without taking into account the effect on it of air power.

That power is so new and is developing so fast that any consideration of its effect upon strategy is necessarily speculative. The past affords us little guidance for the future. Our speculations, if they are to be of practical value, must be limited by consideration of conditions as they are to-day or are likely to be in the near future, and must be constantly revised in the light of new developments and of fresh experience. It is

natural that enthusiasts should be bold in their speculations of the possibilities of the new power. They are unhampered by responsibility, but responsible authorities cannot be guided by speculations which are not supported by some degree of proof. Not only has claim been made that air power can of itself decide the issue of a war between civilised states, but also that aircraft can drive battleships from the sea and that attack by air upon the communications of the armies in the field will render their maintenance impossible. Of these claims, all that it is possible to say at present is that they are not proven. With the development of aircraft still in its infancy, and making yearly astonishing progress, no one but a fool would say that they are impossible of realisation. I propose to examine the claim that aircraft can of itself decide the issue of a great war in my next chapter. But leaving that question aside for the present, it is clearly necessary in any review of strategy to examine the general effect upon it of the advent of the new service. The claim that aircraft can render battleships useless is but the latest development of a claim which was advanced when the torpedo first made its appearance, and was repeated when the submarine became a weapon of naval warfare. Until air gunnery, if I may use this term of the aiming of air bombs and torpedoes, has developed a far higher degree of accuracy than prevails at present, it is improbable that it will achieve what naval gunnery, provided with incomparably superior machinery for the direction and control of fire, has been unable to accomplish, even when every allowance is made for the shorter range at which aircraft can attack, and for the element of surprise which they may attain. Nor is the claim that aircraft

can discharge poison gas upon ships moving at sea, in a sufficiently concentrated form to destroy or stupefy the crews, yet supported by scientists, even if we make the somewhat large assumption that the employment of poison gas is inevitable. The battleship is still the principal naval armament of all great Powers, and is likely to remain so for some time to come.

On the other hand, if the claim that aircraft can drive battleships from the sea seems at present exaggerated, their powers of attack upon unarmoured vessels is a factor in naval strategy of which serious account must be taken; while, though there is no practical experience in the past to guide us, it seems to be highly probable that the effect of attack by aircraft upon merchant vessels in narrow waters, and where a trade route is within a comparatively short distance from a coast, will be serious, and will add very appreciably to the already heavy task of maintaining our long sea communications. In the Great War we had to arm our merchant vessels to enable them to cope with raiders and submarines, and it may well be necessary in future wars to provide them with some form of anti-aircraft defence.

In considering the claim that aircraft can destroy the communications of armies we have some guidance from past experience. This shows that in fact it is very difficult to destroy the communications of an army operating in a civilised country. Raids by large bodies of cavalry upon an enemy's communications have often been carried out in the past. They were of frequent occurrence in the American Civil War. They often effected a great deal of destruction and caused some demoralisation, but the damage was always quickly repaired and the permanent effect of such raids was small unless they were so timed as to delay the move-

ments of troops to a battle-field; that is to say, unless they formed part of a plan of battle, in which case the question always arose as to whether better results would not have been achieved by employing the same cavalry on the battle-field in direct co-operation with the other arms.

During the retreat of the Allied armies from the frontier in August 1914, both we and the French destroyed numbers of roads, railways and bridges, but this destruction caused little delay to the advance of the German armies. In October and November 1918 the Germans in their retreat left behind them buried under roads and railways numerous mines with delay action fuses which caused a great deal of damage. While this caused us considerable delay and eventually made a halt necessary, it never prevented the supply of our armies. Again, it seems improbable that aircraft moving at great speed will be able to cause greater destruction than has in the past been achieved by men working deliberately on the ground.

The effect of attack by aircraft on bases, whether naval or military, which offer a target of size, is a more serious matter, and in view of the supreme importance of the security of bases, their protection against attack from the air must always receive careful consideration. But so far as we are concerned there is no ground for supposing that such attack can yet be decisive. If we are ever again engaged in a great war with an army largely expanded, we shall certainly require a number of base ports, as we did in the last war, while our sea power gives us considerable liberty of choice of bases, and the power to move them if necessary. In August 1914, when the German advance through Belgium threatened the security of our communications with

the Channel ports, we, as is well known, moved our base to St. Nazaire on the Atlantic. Later in the war, when the expansion of our army had developed, we used Dunkirk, Calais, Boulogne, Le Havre and Rouen as bases; if German air attack had made the first three untenable as bases we should not have been greatly embarrassed if we had had to establish bases at Cherbourg and St. Malo. Provided then that we maintain an adequate air force and that we take suitable measures for defence, it is improbable that an enemy would be able to develop such an attack on our military bases as to make the maintenance of our army in the field impossible. It is even less probable that in a war in which our army was comparatively small, and we were using a single base, our opponent would have the requisite air superiority to make an attack on that base decisive.

Naval bases, on the other hand, cannot be moved. The elaborate plant and machinery of a naval dockyard are fixed. Adequate measures for defence are therefore of even greater importance than in the case of military bases. But here again there is no ground for supposing that, given these, such an attack would be decisive in nature, though it may well be the cause of considerable embarrassment. It is not easy to damage permanently a naval dockyard or base, and they are not easy air targets. In the latter part of the Great War the Germans used Bruges as a base for submarines operating from Ostend and Zeebrugge. Repeated air attacks failed to make Bruges untenable, though it was at no great distance behind the German lines, and it was eventually necessary to supplement air attack by naval attack in order to block Ostend and Zeebrugge.

We have not then sufficient grounds for supposing that air power has yet so altered the fundamentals of strategy as to change radically the conditions of war. On the other hand, it does materially affect two of the factors of strategy, the conditions of time and space. From our point of view, perhaps the most important change which air power has yet effected is its capacity to deal promptly with uncivilised and semi-civilised enemies. In the past most of our difficulties in this connection have arisen from the fact that risings, outrages and raids have usually taken place in or from countries difficult of access by military force. Time has been necessary to organise transport and communications suitable to the theatre of war, and the lapse of time has usually given courage to the enemy and caused his forces to increase. But the moral and material effect of air attack, which can be delivered almost immediately, promises to solve for us the problem of small wars, which was such a feature of the Victorian era, except in very mountainous or in jungle countries.

In general, air power has affected the conditions of time and space by extending the range and rate of exploration, by facilitating intercommunication, and by its power of interfering with an army's communications. It is obvious that the powers of reconnaisance possessed by aircraft are incomparably greater than those possessed by cavalry in its palmiest days, and it has restored to war the business of strategic exploration, that is, the discovery of the general direction of an enemy's movements while he is still at a distance, a business which cavalry had been forced in recent times, by the development of quick-firing weapons, to abandon to a great extent. The power of aircraft

to observe is, however, dependent upon weather. It is blind in mist and in fog, while skill in the concealment of troops under cover of night or of close country may prevent it from obtaining information. Therefore means of exploration other than aircraft have still to be provided.

Again, it is obvious that aircraft has affected materially the important strategic problem of the combination of detached or divided forces. It can rapidly bring into personal touch the commanders of such forces or their staff officers. It does not need much imagination to perceive how greatly Wellington's anxieties on the morning of June 15, 1815, at Waterloo would have been relieved, if after the battle of Ligny he or one of his staff had been able to fly over to meet Blücher at Melioreux on the night of June 16, or at Wavre on June 17.

Again, aircraft has the power of doing much to achieve what Hamley has described as one of the main objects of military strategy, the destruction of the coherence and concerted action of an enemy's army by interfering with the communications which connect the parts. This, as I have suggested, must be so timed as to be a part of a general plan, since the effect of such attack is usually temporary. Its most effective form consists in attack on the communications between the headquarters of an army and its parts by the destruction of the telegraphic, telephonic and wireless installations at Headquarters. A striking example of the effect of a successful attack of this kind is that of the attack of our aircraft on September 19, 1918, on Liman von Sanders' headquarters in Palestine. This attack, which was simultaneous with that made on the Turkish lines, prevented control by Turkish G.H.Q.

at a critical time, and contributed in an important degree to the extent of the Turkish defeat. There are many other forms of attack by air which will suggest themselves, as delaying the arrival of detached forces upon a battle-field, or as interfering with the coherence of the enemy's movements. Finally, as I have said already, it may well be within the power of aircraft to make by pursuit success won upon a battle-field decisive, and so make more rapid the achievement of the object of war.

It is evident then that we should not think of strategy as concerning armies alone, nor of naval and air strategy as apart from or unconnected with military strategy. We require a broader definition of strategy than that which is usually given. Nor, if we conceive it as being the art of employing power in war in the most effective way, will it suffice to think of it as being composed only of naval, military and air elements. War being in the realm of social activities and being a political act, statecraft is a most vital and important element in the development and employment of national power. It is difficult to divide precisely the spheres of policy and military strategy, the two often overlap, sometimes coincide. The effective distribution of man power and of supplies of material, finance and diplomacy, which are all within the sphere of statecraft, are all elements of national power. This is put clearly in the Field Service Regulations:—"A nation must protect its vital interests. To do this it may have to impose its will upon another nation. It endeavours to achieve this object by employing part or all the means of persuasion at its command. These means include diplomacy, economic influence applied in the form of financial and commercial restrictions,

and, in the last resort, the use of armed forces at sea, or on land or in the air. The armed forces are only one of several means employed; in a struggle for national existence it is by the simultaneous and combined use of all its means of persuasion that a nation achieves its object—the subjugation of the opponent's will." [1]

Strategy should then, I suggest, be defined anew, to meet our broadened views of what the conduct of war entails, as the art of applying national power to achieve the object of war. Strategy in general, as so defined, comprises political, naval, military and air strategy. Each of the last three of these subdivisions of strategy is governed by the same general principles, though each of the three services has its own technique, different means and different methods of applying these principles.

That this view of strategy in general is in accordance with thought as it has developed since the Great War is shown by the changes which have taken place in our higher organisation both for the preparation for and for the conduct of war.

For the ten years preceding the outbreak of the Great War our Cabinet obtained advice as to plans and preparations for war from the Committee of Imperial Defence, over which the Prime Minister presides. "Much good work was done by the Committee in various directions. Full measures were thought out in 1909 for counteracting any hostile system of espionage and sabotage, the Official Secrets Act being amended in 1911 to give the Government greater powers. An amendment of the Army Act in 1909 also gave authority to billet troops in time of emergency. Lastly, the essential steps to be taken immediately upon the

[1] F. S. Regs., II. 2.

outbreak of war were all of them studied exhaustively, and the distribution of the consequent duties amongst the various departments, and among even individual officials, was arranged in the minutest detail, so that there should be no delay and no confusion. . . . Altogether, Britain never yet entered upon any war with anything approaching such forwardness and forethought in the preparation of the scanty military resources at the disposal of the War Office. The Committee of Imperial Defence was still, however, only an advisory body without administrative or executive functions." [1] In fact, important as was the work done by and under the auspices of the Committee of Imperial Defence in preparing us for the Great War, it had, when war came, achieved little or nothing towards organisation of the Government for the conduct of the war. "The old custom which permitted the India Office, Colonial Office and Foreign Office respectively to wage little wars on their own account, in India, the Colonies and the Protectorates, calling upon the War Office for advice and assistance, or both when they could no longer do without them, was allowed to survive long after its destruction was due. The campaign in Mesopotamia was a case in point. Not until it was nearly a year old was the Imperial General Staff called upon to give an opinion in regard to it, and not until the spring of 1916, when it seemed likely to end in disaster, was responsibility for its direction definitely transferred to that Staff." [2] Many other examples of the lack of unified direction could be adduced from the story of our conduct of the Great

[1] Cf. *Military Operations, France and Belgium, 1914*, p. 13. It was largely due to these measures that the Germans were in ignorance of the movements of our Expeditionary Force before the battle of Mons. [2] *Soldiers and Statesmen*, Robertson, Vol. I. p. 171.

War, and consideration of the loss and misdirection of power which resulted from this has led to important changes in the Committee of Imperial Defence. In 1924 a sub-committee of that body was formed consisting of the First Sea Lord of the Admiralty, the Chief of the Imperial General Staff, and the Chief of the Air Staff. The function of this sub-committee is to furnish advice on defence policy as a whole, "the three constituting as it were a super-chief of a War Staff in Commission." [1] The conception of a super-chief of a War Staff composed of the heads of the three services clearly leads us to a conception of strategy as requiring and comprising the co-operation of those services.

The technique and methods of military strategy are fully described by Hamley, but in studying Hamley or any other writer on strategy it is well to keep always in mind the fact that those who are concerned with war are men who suffer from weariness, hunger, thirst and fear, men who may be roused by leadership to forget or to overcome these ills, and to achieve the apparently impossible, or who may be so depressed by the lack of leadership that they fail to accomplish the possible.

War can never be studied rightly if it is regarded as a sort of magnified chess problem, nor can strategy be rightly understood if it is considered as a theoretical system capable of exposition by diagrams, like problems of geometry. The art of war is not stationary, because progress is continually changing the conditions of time and space on which its application depends. Therefore methods which were suitable and successful in Napoleon's day may be, probably would be, entirely inapplicable to-day. The way to learn from Napoleon

[1] Cmd. 2029, 1924, Part VII. (*c*.).

or any other great commander of the past is to ask first, "What was his object?" Then, "What were his means and the conditions under which he used them?" Then, "How did he use those means?" and lastly, "What should be done with the means and in the conditions of to-day?" One of Napoleon's favourite and most successful manœuvres was to keep his enemy from concentrating by misleading him and mystifying him as to his intentions. Then, concentrating rapidly himself, he would break through the enemy's front and defeat the divided parts of the opposing army in detail. The success of this manœuvre depended upon defeating the first of the divided parts encountered before the remainder could reach the battle-field in sufficient force to affect the issue. In the Waterloo campaign that manœuvre failed because, owing to Wellington's tactical skill and the stubborn valour of the British troops, Napoleon was unable to defeat Wellington before Blücher and the Prussians came up on his flank. To-day that form of manœuvre has become much more dangerous than it was in 1815, not only because aircraft and telegraphy of all kinds have made communication between the divided parts of an army far more rapid and certain, and because improvement in transportation has made it possible for the divided parts to concentrate far more rapidly, but also because the power of resistance of a small force attacked by a larger has greatly increased.

Napoleon began his Waterloo campaign by inducing Wellington to delay his concentration, and then on June 16th he with 75,000 men attacked Blücher, who had an army approximately equal in numbers at Ligny. Napoleon began his attack between two and three o'clock in the afternoon and by nightfall he had defeated Blücher.

On August 23, 1914, two German corps, the 9th and the 3rd, numbering approximately 80,000 men, attacked at Mons, which is within a few miles of the field of Ligny, the 2nd British corps, approximately 36,000 strong. The attack began between nine and ten o'clock in the morning, and by dark the Germans had only succeeded in driving back the advanced British troops on to the main position.[1]

This is an interesting example of how changes in weapons, and therefore in the resisting power of troops, affect the conditions of time and therefore of strategy. It may be that an army well equipped with tanks opposed to an enemy which has not equipped itself with the means of opposing tanks will have the power of overwhelming frontal resistance as rapidly as Napoleon did at Ligny. In that event the conditions of time will again be in favour of the Napoleonic manœuvre. These are the kinds of changes for which we have to be continually watching and about which we have to be continually thinking. The progress of science and of invention as applied to war does not alter the fundamentals on which the principles of war depend, but it does constantly change the methods which can be suitably used in applying those principles.

We have then to think of strategy, first as the art of applying national power as a whole for the purposes of war; secondly, as an art in which moral and psychological factors have a supreme influence, since it is concerned with human beings more than with machines, since even when machines multiply, their employment still depends on men, and thirdly, as an art which is never stationary, since the means and methods of applying it are ever varying.

[1] Our 1st Corps and Cavalry Division and the German 4th Corps were but lightly engaged on August 23, 1914.

CHAPTER IV

THE OBJECT IN WAR

How achieved—Is battle the decisive act of war?—Effect of gas attack on civil population—Effect of bombing on towns—The problem of London—Object of war not attainable by one service—The political object—Examples of its influence on military object—Importance of co-ordinating political with naval, military and air strategy not only in execution but in preparation—Consequences of our neglect of this in 1914—There should be one main object at a time—The development of the Dardanelles campaign—Consequence of having two main objects—Relation of subsidiary object to the main object—Illustrated by campaign in Mesopotamia—Our liability to dispersion in war—Our power most effective where land and sea meet—Conclusions.

THERE is no dispute as to the ultimate object in war. It is the restoration of peace on satisfactory terms. Nor is there any doubt as to how this is to be done. It is achieved by overcoming the opponent's will to continue the struggle. As I have pointed out in the last chapter, there has never been any question until recently, that once a state of war has arisen, the way to overcome the opponent's will was to defeat his armed forces. Now it is suggested that it is within the power of aircraft to terrify the civil population of an enemy country to an extent which will overcome the opponent's will even if his armed forces are undefeated.

The Field Service Regulations say: "Battle is the decisive act in war." [1] It is clearly necessary to make

[1] F. S. Regs., II. 21.

up our minds whether this is true or not before we consider principles the professed purpose of which is to help us to fight battles in the most effective way. If it is the case that the object in war can be most quickly and effectively gained by bombing towns and by flooding them with poison gas, there is no use considering military principles, which at best promise a slower and more costly way of gaining that object.

I do not propose to argue whether gas is, or is not, a more humane weapon than are shell and bullets. The point is that the area affected by gas attack, more particularly when it is discharged from aircraft, is far less controllable than is the area affected by the discharge of guns and rifles. In consequence, gas warfare has greatly increased the dangers of war to the civil population, and the idea of subjecting women and children deliberately and directly to the danger of war is one which is abhorrent to decent persons. For that reason an agreement has been reached by a number of the chief Powers, of which Great Britain is one, not to initiate the use of poison gas in war. It is, of course, possible that such an engagement may be violated by an enemy, as such engagements have been violated in the past. It is equally possible that we may be at war with an enemy who has not signed and therefore is not bound by this engagement. Therefore prudence prescribes that we should be ready in every way for gas warfare. But, as I have already said, experience has proved that the risks entailed by breaking a solemn international engagement are very real, and they are not likely to be undertaken lightly. In any event it is certain that no British Government will deliberately initiate an

attempt to overcome the opponent's will to fight by terrifying his civil population through the use of poison gas, and we cannot, then, rely upon gas to achieve the object of war.

It remains to consider the use of aircraft for the bombing of towns. London and many other towns were bombed during the Great War, and it is true that the power of aircraft to make that form of attack has increased enormously since 1918, is increasing, and will increase. But it by no means follows that bombing attacks upon the civil population will be deliberately undertaken as a means of obtaining the object of war. Here again the risks of employing this method of warfare are great. Such an attack if not immediately and completely successful would bring retaliation and expose the civil population of the assailant to the same dangers. It is unlikely, therefore, to be adopted deliberately unless there seems to be a good prospect of ending the war at once by this means, or unless it is employed as a last desperate measure when all else has failed, or seems likely to fail. Both of these dangers can be met by providing adequate defence. It is reasonably certain that railway junctions and stations, arsenals, centres of supply, and other places of military importance will be the object of air attack, and that the civil population living in the neighbourhood of such centres will be exposed to great danger. But such attack will be different in nature and effect from one which makes the civil population its chief target.

Most British writers who have ascribed to aircraft the power of obtaining unaided the object of war seem to have been unduly influenced by the problem of the defence of London against air attack. A vast

city lying on a great river and at a short distance from the coast makes a unique target for aircraft. Its defence against attack from the air is therefore a very difficult problem, but it is not as insuperable as some would have us believe, even if deliberate attacks were made upon its population. It is within our power to make attacks so costly that they are unlikely to be maintained to an extent which would force us to surrender, and just as prudence commands us to be ready for gas warfare, so prudence requires us to have such a degree of air defence. The problem of the air defence of England is one which differs only in kind from one which has confronted us during the past hundred years. Ever since we ceased to grow the food needed by our population we have been in danger of starvation if our fleets were decisively defeated at sea. In such an event our enemies might have achieved their object in war without defeating our armies in the field. We have provided against such a danger by having a fleet of sufficient strength to give us adequate protection. We have to meet the problem of air defence in the same way, and while it is not possible to obtain command of the air in the way in which it is possible to obtain command of the sea, and therefore immunity against air attack cannot be secured, it is possible to provide air defence sufficient to prevent air attack from being decisive, even in the by no means certain eventuality that the enemy would make attack upon our civil population his object.

When we descend from generalities and examine the situation as it is to-day, we find that the grounds for supposing that aircraft alone can achieve the object in war grow smaller.

At the present time there is only one Power in existence, France, which could venture to make attacks by air either with gas or with bombs, on London, and France is fortunately not amongst our most probable enemies, while the defence of the British Empire might bring us into conflict with enemies who could not by any possibility attack London, or any other part of the British Isles, from the air. London, as I have said, is unique, and when we turn our eyes from that great city to look at the rest of the world, the probability of aircraft being able to so terrify an entire population by bombing attack seems remote. Twice within the last sixty years the French Government has been compelled to leave Paris, and within that period the capital of France has been besieged and bombarded, but the will of the people of France to fight was not thereby subjugated. In the South African War we occupied every town in the Transvaal and the Orange River Free State, but that did not cause the Boers to surrender, and there is no reason to suppose that if we had driven their people from their towns by bombs the result would have been different.

The object in war is, then, in a struggle for national existence, not to be obtained by any one service. "It is by the simultaneous and combined action of all its means of persuasion that a nation achieves its object." [1] How is this simultaneous and combined action to be secured? If the ultimate object is the subjugation of the enemy's will, there must be in war a number of subsidiary objects all leading up to the ultimate object. There will be a political object, a naval object, a military object and an air object.

[1] F. S. Regs., II. 2.

These objects must be in unison and should be as far as possible concentric, not eccentric. This is of greater importance for us than for any other nation, because the nature of our power is of such variety.

War being a political act, the political object must govern the other objects of war. The political object may be such as to require the complete conquest of the enemy; or it may be obtained if the enemy is compelled to sue for peace on terms satisfactory to the Government; or the object may be to induce other Powers to join as allies; or it may be to cause the enemy to abandon the purpose for which he went to war. Each of these objects influences variously the amount of force required to gain the object and the method of employing that force. To achieve the first of these objects it may be necessary to employ forces which are greatly superior to those of the enemy, and to occupy his country, or at least the most important centres in it. The last of these political objects may be obtained, or seem possible of attainment, by forces which are inferior to the enemy's whole armed power. For example, in the South African War of 1899–1902 there never was any prospect that the Boers would be able to defeat the armed forces of the British Empire, but President Kruger hoped to be able to prolong the resistance of the Boers to an extent which would either cause the British people to decide that the attempt to bring the Boer Republics into the British Empire was too costly in life and treasure to be continued, or would bring about foreign intervention on his behalf. The Boers succeeded in prolonging the struggle to an extent which demonstrated that this was not such a vain hope as it appeared to many at first to be. The British object was only

obtained after the Transvaal and the Orange Free State had been completely occupied, and this required the employment of forces very superior to those of the Boers.

In the Napoleonic wars British military power seemed insignificant in comparison with that at the disposal of the French Empire, but sea power gave us access to the coasts of Spain and Portugal. In making our immediate political object the support of Portuguese and Spanish insurrection against the French, we were able to create what came to be known as the Spanish ulcer, which drained Napoleon's strength and enabled us to influence the issue of the war more effectively than if we had united our small army to the larger armies of our allies in Central Europe. If the Napoleonic wars are viewed as a whole, the action of our army in the Peninsular War may be properly regarded as the skilful use of a detachment, since it forced Napoleon to detach from his main army forces larger than was our detachment from the main bodies of the Allies. But it is also a good example of how the wise choice of a political object enables a comparatively small army to be employed with great effect.

In the Crimean War of 1854–55 our political object was to stop Russian aggression against Turkey, and to prevent the development of Russian naval power in the Black Sea. The Franco-British Expeditionary Force sent to the Crimea was far inferior in numbers to the military forces of Russia, but sea power gave us great liberty in the choice of the theatre of war, and in the Crimea we were able to use naval and military power in combination at a point where the Russians were compelled to place their army at the end of

a long and inferior line of communication, which could not maintain more than a limited number of men. The Crimean War is usually remembered by us because it exposed the defects in our military organisation, and our lack of preparation for war, and while these undoubtedly led to a great waste of power and to the prolongation of the war, the campaign is none the less an admirable example of the effective co-ordination of the political, naval and military objects. The mistake which we then made was in not seeing that the military means were adequate.

An excellent example of how the political object governs the military object is furnished by the story of the American Civil War of 1861–65. In that war the political object of the Northern or Federal States was to prevent the Southern or Confederate States from seceding from the Union. The political object of the South was to obtain independence. The North was greatly superior, in numbers and resources, to the South, and the latter never conceived a conquest of the North to be possible. The object of the Southern President, Jefferson Davis, was very similar to that of President Kruger. He hoped by prolonging resistance to convince the North that it was not worth the cost to compel the South to remain in the Union, or to bring about foreign intervention in favour of the South. The great Southern General, Robert E. Lee, conceived that the best way to obtain either or both of these political objects was to carry the war into the North and to defeat the Northern armies in their own territory. His strategy from 1862 until the summer of 1863 was therefore offensive. When in July 1863 he was defeated at the battle of Gettysburg he had no longer the means to continue an offensive policy, and

it became obvious that there was no hope of foreign intervention. So from that time until the end of the war his strategy was defensive, with the object of exhausting the power and the patience of the North. The North, on the other hand, like ourselves in the South African War, could only obtain its political object by defeating the Southern armies completely and by occupying a great part of Southern territory.

These examples will suffice to illustrate the truth of the old saying, which is to be found in one form or another in most works on strategy: "Policy and strategy must go hand in hand." In other words, when there is any liberty of choice, the political object must be chosen so that the national power can be most effectively employed in its attainment, and so chosen that its attainment is within the means available. The preparation of the initial plan of campaign should therefore be made by the Government in consultation with its naval, military and air advisers. If the British Empire is ever again engaged in a great war, it will most probably be, in the future, as it has been in the past, as a member of an Alliance. Our power being, as I have said, different in character from that of most other Powers and from that of all continental nations, it is of great importance to us, if we are to exert, in the Alliance, influence corresponding to the extent of our contribution, that the nature of our power should be made clear from the first and that we should have an effective voice in the preparation of the allied plan of campaign.

This unfortunately was not the case in 1914. I have explained that the Committee of Imperial Defence, the body immediately responsible for the co-ordination of policy and strategy, met only inter-

mittently in the years before the Great War, and had not, as now it fortunately has, any permanent organisation for that purpose. In 1904 the British Government decided to conclude an *entente* with France, and two years later it authorised the British General Staff to enter into conversations with the French General Staff with the object of arranging for joint action by the two armies in the event of German aggression. It was expressly stipulated that these conversations were to be entirely unofficial and did not commit either Government to any action. These military conversations were continued during the next eight years and eventuated in the working out in complete detail of the plan for placing our little Expeditionary Force on the left of the French line. These arrangements were made with great skill and were carried through without the smallest hitch. After the military plan of campaign had been prepared completely and after the outbreak of war, the British Government called together a Council of War on August 5, 1914, to consider the political object of the war and to approve the plan. It was then found that little was known of the details of the French plan with which we were to co-operate, and that it was too late to make changes in our military plan. The political object of the war was declared by the Prime Minister to be to maintain the sanctity of international engagements and to uphold the rights of small nations. The military object as stated by Lord Kitchener on behalf of the Government was to co-operate with the French in driving the Germans out of France and Belgium. There was no specific naval object assigned by the Government. The Admiralty's plans had been prepared in what was known as the War List, which

assigned various functions to our fleets and warships. These may be summarised as the protection of our sea communications and commerce, the interruption of the enemy's communications and commerce, the protection of the British Isles against invasion, and the duty of bringing the enemy's warships at sea to action. Plans had been prepared by the Admiralty with the War Office for the shipment of the British Expeditionary Force to France and for the protection of its sea communications, and co-operation had been arranged with the French Navy both in the Channel and in the Mediterranean. But no attempt was made to correlate the political, naval and military objects. This was indeed impossible because the military plan had been concluded before the consideration of policy was begun. We were compelled to co-operate with a French plan, which we had to take on trust, though our fortunes were inextricably involved in it, and we gave the French a blank cheque. Farther, no attempt had been made to combine a naval plan with the military plan, and, in fact, during a considerable period covered by the conversations our Admiralty had an entirely different plan. Consequently the importance of our naval contribution was not appreciated in France at its proper value, and opinion there tended to measure the value of our support by the size of our army in France. We were therefore unable for a long time to exercise on the conduct of the war the influence to which we were entitled. Our strategy was subordinated to French strategy.

Now it was impossible for the Government to commit the nation to war before the cause of quarrel with Germany arose, but if we had been able, as we now are, to prepare and present to the French not merely

a military plan but a combined plan, it is probable that our first contribution would have been more effective and our influence on the conduct of the war much greater. In the event our military plan placed us in a position of great embarrassment at the very outset. Not only were we compelled to undertake a long and exhausting retreat, but we were also compelled to consider the abandonment of our line of communications and base before we had fired a shot. Field-Marshal Sir William Robertson, who was Quartermaster-General of our original Expeditionary Force, says: "Before the Expeditionary Force had fired a shot, its line of communication became so menaced by the probability of an enveloping movement on its left flank that, as Quartermaster-General of the Force, I had to consider the possibility of having to abandon the sea bases at Le Havre and Boulogne and to establish others further to the south. On August 22, the day before the battle of Mons, I summoned the Inspector-General of Communications, Major-General Sir Frederick Robb, to G.H.Q. at Le Cateau so as to discuss further developments with him." [1] Five days later the Commander-in-Chief ordered the bases on the Channel coast to be abandoned and a fresh base to be established at St. Nazaire on the Atlantic. Immediately after the battle of Mons the effect on our naval plans of the occupation of the Channel ports by the Germans had to be considered. "Admiral Jellicoe was informed of the serious consequences which seemed to be developing out of the battle of Mons, and warned to consider the possibility of having to fix a new position for the Grand Fleet should the Germans get control of Calais

[1] *Soldiers and Statesmen*, 1914–18, Robertson, Vol. I. p. 55.

and the adjacent French coast—that is, in fact, if they succeeded in breaking into the Dover defile. Here then, as the direct result of a military reverse, we were faced with the by no means remote prospect of the fundamental distribution of our Fleet no longer sufficing for the exigencies of the war." [1] There is no evidence that either of these eventualities, the abandonment of our line of communications or the occupation of Calais by the Germans, was considered when our plans were made. This is an example of the extreme importance to us in making plans with an ally of keeping to the fore our special needs and the special nature of our power, and it is also an example of the danger of making a military plan unco-ordinated with other plans.

We could not do this in 1914 because we had not the proper machinery and organisation for doing it, and this involved us in difficulties which hampered us for a long time. When at the end of 1914 the trench barrier was established from the coast of the North Sea to Switzerland, it became evident that it would be a very slow and costly business to gain our military object—to drive the Germans out of France and Belgium. A number of other plans for achieving the political object were therefore considered, and eventually in February 1915 the British Government decided to undertake a campaign in the Dardanelles with Constantinople as its objective. This was an attempt to apply our sea power more directly to the object of the war. I do not propose here to go into all the mistakes which were made in the initiation of the Dardanelles campaign. To some of them I shall have to refer later in illustration of the application

[1] *Official History of the War : Naval Operations*, Vol. I. p. 94.

of principles of war. As is well known, the failure of the naval attempt to force the Dardanelles involved us in a great military campaign. Thus we had at the same time two military objects in 1915. One to drive the Germans out of France and Belgium, the other to drive the Turks from the Gallipoli peninsula in order to open the way to Constantinople for our Fleet.

Now all the experience of past wars shows that there should be one main military object at a time. If there is a subsidiary object it should help directly in securing the main object, and there should be means available both for the main and the subsidiary objects. This does not mean that the first military object chosen should be maintained throughout the war. It should, in fact, be changed to meet changing conditions, just as Lee changed his object in the American Civil War, but it does mean that it is usually a mistake to aim at securing more than one object at a time.

The general conception behind the Dardanelles campaign was good. It afforded us an opportunity of using our naval and military power in combination. The advantages which success would bring were great. It might compel Turkey to make peace and would certainly reduce greatly her offensive power, it would have great influence on the attitude of the Balkan States, and would open up communication with Russia. If we had had the means available to pursue, at one and the same time, our object on the Western Front and at the Dardanelles, the latter would have been a most valuable subsidiary to the former. But we had not the means either in trained men or in munitions. Therefore, as it seems to me, the best course would have been to have made the

forcing of the Dardanelles and the occupation of Constantinople the military object of 1915 and to have changed the policy of the Western Front to a defensive policy. I shall have something to say when I come to the principle of security as to when this could best have been done. This change was unfortunately impossible because the Germans were in occupation of a large part of France, and the proximity of the enemy's lines to Paris threatened the security of France. Therefore the French policy was to use every effort to drive the Germans farther back. The British Government felt that it could not change the object of the war on the Western Front without endangering our relations with our allies, and it actually directed our Commander-in-Chief to co-operate with the French offensive campaign of the autumn of 1915—the campaign which resulted for us in the battle of Loos—against his judgment. The preparations for the autumn campaign in France and for our final effort to secure victory in the Dardanelles were therefore going on simultaneously, and our means being limited there was a constant tug between the two theatres of war, which affected the operations in each.

Our failure at the Dardanelles led us to a premature attempt to occupy Baghdad as a set-off. That attempt resulted in the siege of Townsend's force in Kut-el-Amara, and protracted and costly efforts had to be undertaken for its relief. When eventually we did occupy Baghdad our army in Mesopotamia had to be maintained at the end of a line of communications more than 500 miles long, and reports reached us of Turkish preparations to recapture Baghdad. In order to draw Turkish attention from Mesopotamia we

undertook in 1917 the invasion of Palestine, which resulted in the occupation of Jerusalem. So one initial departure from a principle led to a whole chain of consequences, and great dispersal of our power. It is a common practice to criticise our strategy in the Great War as if we had been entirely free agents. The members of an Alliance are never entirely free. There must always be a certain amount of give and take, but with us there was for a great part of the war a good deal more give than take, because we had been unable to exert our influence fully in the preparation of the first plans. Our power being different in nature from that of all continental nations, it is a matter of prime importance for us that we should be able to exercise due influence in the decision as to how that power should be used.

Our sea power makes our national power very mobile. It is easily transported to great distances, while the fact that the British Empire extends into every quarter of the globe causes our interests which require protection to be very scattered. Dispersal of force is therefore almost inevitable in any great struggle in which we may be engulfed. But we should be careful not to yield to the temptation to extend that dispersal because our mobility makes it easy to do so. We have to consider continually, What is the object of the war? What is the bearing of any subsidiary operation upon the attainment of that object? Have we the means to carry through the subsidiary operation without detriment to the main object?

The campaign in Mesopotamia is an interesting example of the consequences of failing to answer rightly such questions as these. We went to Mesopotamia in the autumn of 1914 in order to influence the

Arab tribes at the head of the Persian Gulf, and to protect the pipe line of the Anglo-Persian Oil Company—perfectly legitimate measures of defence. Having established our force at Basra with remarkable ease, we went forward to occupy the line Kut-el-Amara–Nasiryeh, as giving us a better general line of defence. At Kut we seemed to be within striking distance of Baghdad, and our arrival there coincided with the failure of the Dardanelles campaign. The occupation of Baghdad in 1915 could have had no direct bearing upon the attainment of the object of the war. It was undertaken for political reasons; to restore our prestige in the East, which our failure at the Dardanelles seemed likely to diminish. Our first advance to Baghdad should therefore only have been undertaken if ample means were available without drawing upon resources required for the attainment of the object of the war. There was no proper consideration of the means available owing to a variety of misunderstandings, and the failure of our first advance on Baghdad involved us in serious consequences.

It has been estimated that in Mesopotamia we employed approximately 400,000 combatants and 490,000 non-combatants, in Palestine 1,190,000 combatants and non-combatants, that is, together more than 2,000,000 men, to conquer 400,000 Turks, and this waste of power was due firstly to the mistake of having two main objects at the same time, and secondly to insufficient consideration being given to the bearing of our subsidiary operations upon the object of the war. These subsidiary campaigns have been termed "side-shows," and the justification of a "side-show" may be tested in two ways: firstly, its part in protecting a vital or important interest, for example, the

protection of the Suez Canal may be classed as vital, the protection of the pipe line in Mesopotamia as important; secondly, by its influence upon the attainment of the object of the war.

I have said that we are particularly liable to yield to the temptation to dispersal. Political pressure to provide protection is difficult to resist, and our geographical position makes it a hard task for us to employ detachments to the best advantage. In the Great War we were throughout operating on exterior lines against our enemies the Central Powers, who were on interior lines. It is a comparatively easy matter for a good general operating on interior lines to make skilful use of detachments to occupy superior forces of the enemy and so, though weaker in total strength, to be in superior force on a battle-field. Brilliant operations on interior lines make a fascinating study, and the campaigns of Napoleon in 1814 and of Lee in 1862 are attractive to the military student. But the fact that our army has normally to be employed across the seas means that our communications have normally to be exterior, and the correct use of detachments in exterior lines is much more difficult. Therefore the study of operations on exterior lines is of more value to us, and from that study it will be seen that the problem can only be solved when the object, not of any one particular operation, but of the war as a whole, is kept in mind.

If, as the Field Service Regulations say, the prime object of the Army in war is, "in co-operation with the Navy and the Air Force, to break down the resistance of the enemy's armed force in furtherance of the approved plan of campaign,"[1] it follows that the

[1] F. S. Regs., II. 4.

Army can be most effectively employed and our military power as a whole be most effectively exercised when our Army is within comparatively easy reach of the coast. Therefore in choosing the object of a war, when we have any liberty of choice, that particular feature of our power must be ever in our minds, and we should be very chary of going far inland unless circumstances leave us no option in the matter.

From this review of the objects of war we may draw the following general conclusions:

(1) The object in war may be either the complete conquest of the enemy; or to make him sue for peace on satisfactory terms; or to cause him to abandon the purpose for which he went to war.

(2) These objects are obtained by overcoming the will of the enemy people to continue the struggle.

(3) This is normally obtained by defeating his armed forces.

(4) The political object of the war must govern the naval, military and air objects.

(5) The political object must be within the military means.

(6) The naval, military and air objects should be concentric.

(7) In choosing the military object the nature of our national power must be considered.

(8) Every military operation must be tested by its bearing upon the attainment of the object.

(9) There must be one main military object at any one time.

CHAPTER V

THE PRINCIPLE OF SECURITY

Napoleon's view of security—Importance of satisfying Government as to national security—Example of neglect of this by McClellan in 1862—Effect of political influences on military plans—Object of providing security to obtain freedom of action—Military as distinct from national security—The security of concentration—The security of communications—Caution in planning, boldness in execution—Security in the field a purely military question—Examples of consequence of failure to resist political demand for security and of consequence of failure to estimate correctly requirements of military security—The Dardanelles campaign and security of Western Front—Contrast between Lee's problem in 1862 and ours in 1914—Conclusions.

It will be gathered from what I have already said that I am not amongst those who believe that in these days of tanks and aircraft we have nothing to learn from Napoleon and other great commanders who had not those weapons of war. One of Napoleon's dicta is that every plan of campaign must be based upon a sound and well-considered security. He described his attitude of mind in preparing a plan of campaign as that of the veriest coward. "I endeavour to conjure up all possible dangers, to foresee all difficulties." "Military science," he said, "consists in weighing carefully all possible eventualities and then eliminating, almost mathematically, chance. It is here that no error must be made, for a decimal more or less may change everything." [1] We find, in fact, that

[1] Bourienne, I. p. 186.

this cautious care in founding their plans upon the security of what is vital is common to all great commanders. The reason why Hannibal spent so much time and labour in completing the conquest of Spain and in making his position there impregnable was, that Carthage not having the command of the sea, he could in no other way obtain a secure base for the invasion of Italy. We find Cromwell, when in 1655 he sent his first expedition to the West Indies, urging its commander, Colonel Fortescue, "to study first his security." And so on right through military history we find that those who were boldest and most successful in action were the most cautious and careful in the preparation of their first plans.

Now Napoleon during most of his campaigns, and Cromwell when he made his generalship to be feared throughout Europe, directed at one and the same time both the State and its military forces. No British general can ever be in that position. The British Government maintains the armed forces of the Crown for the purpose of securing the State and its vital interests, and for these it is responsible to the nation. It can never divest itself of this responsibility, and therefore must always be convinced that any military plan provides adequately for the security of the vitals of the State. If it is not, political interference in the execution of the plan is almost inevitable, and the most promising campaign may be wrecked because the confidence of the Government has not, at the start, been secured. Therefore in this problem of security the political and military elements are closely intertwined. Cromwell and Napoleon had only to satisfy themselves that they had foreseen and provided for possible dangers; the British general has to satisfy both himself and his Government.

A striking example of the consequences to a plan of campaign of neglecting to satisfy the Government as to security is afforded by the opening phases of the campaign of 1862 in the American Civil War. In March 1862 McClellan, the commander of the Federal forces, controlled, on the frontiers of Virginia, forces numbering approximately 180,000 men, against which the Confederates had not then more than 71,000 men available for the defence of Virginia and of their capital Richmond. But in the previous year an attempt by the Federal forces to make a direct advance upon Richmond by land had been defeated in the first battle of Bull Run. Further, there were at that time few roads in Virginia, and during the spring months the condition of these was bad. McClellan therefore conceived the plan of utilising the command of the sea, which the Federals possessed, to transfer the greater part of his army secretly to the Yorktown peninsula, where it would be within about sixty miles of Richmond. The Federal President, Abraham Lincoln, approved of this plan of campaign on the express condition that due provision was made for the security of the Federal capital, Washington, which, being separated from Virginia only by the width of the river Potomac, was very exposed to attack. In the event General McClellan, doubtless with a view to secrecy, embarked for the Yorktown peninsula without taking the President into his confidence, or explaining the measures taken for the protection of the capital, nor did he ascertain that the officer appointed to command the defences of Washington, General Wadsworth, was satisfied that he had sufficient troops for the purpose. He contented himself with sending to his War Office a list of the troops left behind. The President then ordered a military

committee to inquire whether his instructions for the security of Washington had been complied with. General Wadsworth declared that the troops at his disposal were neither in numbers nor in quality sufficient, and the President thereupon ordered that an important part of McClellan's army, his 1st Corps commanded by General McDowell, should remain in Northern Virginia to cover Washington. Nor was this the worst, for McClellan's attitude had created a feeling of suspicion in the President's mind, and if there is suspicion and lack of confidence it is easy to create alarm. When, on May 25th, Stonewall Jackson with some 16,000 men defeated the Federal commander Banks in the Shenandoah Valley, something near akin to panic was created in Washington, and troops intended to co-operate with McClellan in his attack upon Richmond were diverted to a wild-goose chase after Jackson.

McClellan complained bitterly of political interference with his plans. He pointed out quite rightly that the military object was the defeat of the enemy's forces covering Richmond, and the importance of concentrating on that object, but a government responsible for the security of a nation can hardly be expected to trust to the issue of a battle fought at a distance, when that security appears to be threatened by a danger which is nigh, at least until its commander has won by achievement in the field its own and the nation's confidence. In these days and in such circumstances a Government is exposed to great pressure, which it is difficult to resist from the Press and from public clamour. McClellan had, in fact, left behind enough troops to defend Washington, for Jackson had no intention of crossing the Potomac with his small

force, still less of attacking the Federal capital. It was the failure to establish confidence between the political and military chiefs when the plan was being made that played into the enemy's hands and hampered the execution of the plan from the outset.

It can very rarely happen in any war in which the vital interests of a nation are concerned that a commander can be wholly free from political influences of this kind, and he is wisest who takes them most fully into account. Nor is it possible to judge of the action of a commander fairly unless these influences are taken into account. The first German Chief of the General Staff, the younger von Moltke, has been freely criticised in Germany and elsewhere because he did not follow the advice of his predecessor, von Schlieffen, "to strengthen the right wing." He is accused of having ruined his plan of campaign by making his left too strong at the expense of his right. But the German Empire of 1914 was not a homogeneous nation completely controlled by one central government. It was a confederation of kingdoms under the hegemony of Prussia, and there was considerable jealousy of Prussia in the southern kingdoms, Bavaria, Würtemberg and Baden. The German General Staff had reason to anticipate that the French plan of campaign would consist of an invasion in force of Alsace-Lorraine, and this, if successful, would lead the French into South Germany. A plan of campaign drawn up by Prussia, which would provide complete security for Prussian territory against French attack, while exposing the other States to the danger of invasion, would not be likely to produce enthusiastic co-operation in Germany as a whole. Therefore a reasonable degree of protection for Southern Germany

was politically necessary. This is another example of the kind of influences which affect a plan of campaign, influences which, if not cautiously and carefully considered beforehand, may wreck plans which are from a purely military point of view admirable.

The main object of this cautious care in the preparation of a plan of campaign is to secure freedom of action in its execution. Foch puts this clearly: "We must constantly penetrate our minds with this necessity of safeguarding, above all, our own freedom of action, if we want to find ourselves, at the end of an operation (still more at the end of a series of actions), free; that is, victorious: not ruled; that is vanquished. A constant preoccupation, while we prepare and combine an action against the enemy, must be to escape his will, to parry any undertaking by which he might prevent our action from succeeding. Any military idea, any scheme, any plan, must therefore be connected with the conception of security. We must, as if we were fencing, attack without uncovering ourselves, parry without ceasing to threaten the adversary." [1]

Having established confidence in the minds of his political chiefs as to national security, a commander has next to consider more strictly military security, and, since the maintenance of his force depends upon his communications, it is to the security of these, and also of the area in which his army is concentrated, that he must next give his mind. An army cannot operate as a whole until it is assembled, and any interference in the process of assembly is obviously dangerous, nor can a commander have freedom of action if he has to be continually looking over his shoulder at his communications and base. For these

[1] Foch, *Principles of War*, p. 101.

reasons the Field Service Regulations put as the first two points to be considered in preparing for a campaign overseas:

> (1) Selection of the base or bases and the concentration area.
>
> (2) Arrangements for the security of the base, lines of communication and concentration area.[1]

In the matter of the security of the area of concentration we usually start at a disadvantage in an overseas campaign. Having to transport our troops in ships, we can never hope to be able to concentrate as rapidly as can a continental nation, which is able to work out a detailed plan of mobilisation, and of concentration based on railways. Therefore, when we are members of an alliance, we have usually to depend upon our ally to cover our concentration, as happened in August 1914, when we assembled our Expeditionary Force behind the French fortress, Maubeuge. But sea power gives us one great compensatory advantage in the wide choice of landing-places which it usually affords us. By this means we have often been able to attain security by appearing from a direction and at a place unexpected by the enemy, that is, by surprise.

When we are engaged upon a campaign within or on the confines of the Empire against an enemy who is stronger than the local garrison, it usually happens that the enemy is able to strike first. The local garrison is then of the nature of an advanced guard, which has to do its best until the main body arrives from home. In such cases the choice of the area of concentration must depend upon developments. As

[1] F. S. Regs., II. 20.

a British Government is usually unwilling to go to war until it is evident that war cannot be avoided, the despatch of troops from home is often perilously delayed, and the British commander finds that at first at least he has very little freedom of action, and cannot choose his area of concentration in accordance with a prearranged plan. In the South African War of 1899–1902 the Boer forces were at first superior to our local forces in the Cape Colony and in Natal. Our original plan of campaign provided for a defensive policy in Natal, and for the invasion of the Orange Free State from the Cape Colony, in which our main concentration was to have been made. When our Commander-in-Chief, Sir Redvers Buller, arrived in South Africa he found the situation in Natal so menacing that he had to make his main concentration in that Colony. He had, in short, to conform to the enemy, and it was not until Lord Roberts arrived with larger forces at the end of 1899 that the original plan could be resumed. The nature of the British Empire and the fact that we are an island make the problem of the selection and security of an area of concentration a very different one for us from that of most other nations.

In securing lines of communication, sea power gives us great advantages, in that it allows us to change rapidly a threatened line of communications usually without the enemy's knowledge. In August 1914 the commander of the 1st German Army opposed to us, von Kluck, was unaware that we had moved our base to St. Nazaire, and after the battle of Le Cateau he, instead of using all his available troops to pursue us directly, diverted a considerable part of his army to cut what he believed to be our communications with

the Channel ports, and this undoubtedly made our retreat much easier.

But though we usually have in war this great and valuable safeguard, it is obviously a disadvantage to be compelled to change a base and communications which have presumably been deliberately chosen because they are the best possible for our purpose. Therefore security of communications must always be a consideration of the very first importance in the preparation of a military plan.

If then he has taken care first to assure his Government that the vitals of the nation are adequately secured, and has given such careful thought beforehand to the security of his base and communications, that he is free from anxiety on this score, a commander has taken the most important steps to ensure that he has freedom of action. His next requirement is security in the execution of his plan. Of tactical security, that is, of the duty of every commander of every force in every circumstance to provide himself with protection, I do not propose to speak. Given always that the means are adequate, and it is, as I have explained, an essential condition that the means should be available for the object of the war, strategical security is best obtained by bold, resolute action in accordance with the chosen plan. Caution in planning, boldness in execution, are the keys to security. In planning, conjure up, as Napoleon advised, every possible difficulty and danger, but, having provided for these as far as human forethought can do so, never take counsel of your fears in action. In war our own difficulties and dangers always loom large and we are apt to forget those of the enemy, which are probably as great if not greater.

Boldness in execution involves taking risks, and the responsible commander must be sole judge of when risks taken in the execution of his plan are justifiable. If the stateman is justified and entitled to insist upon provision for the security of the vitals of the nation, he is not entitled to express an opinion upon the security of the army in the field, because that is a purely military question, which can only be decided by the soldier. The calculation of risks involves a nice consideration of the factors of time and space. An army whose flanks or communications are threatened before it can endanger the flanks and communications of the enemy is obliged to conform.[1] "Thrice armed is he who gets his blow in first," and therefore swift and resolute action is a far better means of providing security than the attempt to be safe everywhere, which usually means being safe nowhere.

An example of the failure to resist political pressure to provide security, where such pressure should have been resisted on military grounds, is afforded by von Moltke's action in August 1914. Two Russian armies had invaded East Prussia, and were opposed by a far inferior German force. This invasion created great alarm in Prussia, and political influence was brought to bear to induce von Moltke to send help to the Eastern Front. By August 25, 1914, the battle on the frontiers of France and Belgium had come to an end, the Franco-British retreat was in full progress, and exaggerated reports of the extent of the German victories reached German Headquarters. Von Moltke then yielded to pressure and despatched two army corps and a cavalry division from the Western to the Eastern Front. Now on August 25th the head of the

[1] Cf. Hamley, Chap. II.

Russian invasion was still many miles east of the Vistula, which is approximately 250 miles from Berlin; on the Western Front the German right wing was at that time well beyond the Sambre, which is about 100 miles from Paris, following up a retreating enemy. The Russian advance did not and could not threaten immediately any interest vital to Germany, while the German advance into France did threaten very directly interests vital to the Allies. Therefore the general situation and the conditions of time and space were favourable to the adoption of the bold course of prosecuting the advance against the Allied armies with the greatest vigour, and in the greatest possible strength, while delaying the Russians with the minimum of force. In fact the two army corps and the cavalry division did not reach the Eastern Front until the battle of Tannenberg was over and the Russian invasion of Prussia had been decisively checked, and they were absent from the battle of the Marne, where they might have sufficed to determine the issue.

It is no uncommon experience in war that troops diverted from one theatre to another spend the critical period in travelling and are useless in either. We had ourselves an example of this in 1917 at the time of the battle of Cambrai, when our tanks were used for the first time in a surprise attack on a considerable scale. It happened that while the final preparations for our attack on the Cambrai front were being made, an Austro-German attack broke through the Italian front in the battle of Caporetto, and a serious crisis arose in that theatre of war. It was for political reasons desirable to give the Italians support, and four French and four British divisions[1] were sent to Italy.

[1] A fifth division followed a little later.

Before the British divisions reached the front the Austro-German advance had been checked, while there is little doubt but that the presence of those four divisions at Cambrai would have turned a moderate success, which was to a great extent annulled by a German counter-attack, into one of real importance. It is always a very difficult matter to hold the balance just between political and military requirements in war, but it may be taken as a general rule that in the preparation of the original plan, political needs should be given the fullest consideration, while in the midst of a campaign only the most exceptional circumstances can justify political interference. The initial plan can never properly go beyond the moment of first contact with the enemy, since all subsequent military movements must to a greater or less degree be affected by the enemy's action. The only man who can estimate justly the factors of time and space and has under his eyes the detailed information on which to base a military manœuvre is the commander on the spot. He, as I have said, alone can decide what risks are justified and what are not.

Just as in planning a campaign regard must be had to the security of the vitals of the nation, so in arranging for a subsidiary enterprise, or in making a detachment, regard must be had to the security of the vitals of the army. I said in my last chapter that we, in 1915, made the mistake of having two military objects at the same time without having the means for both. But there was a further departure from principle which also affected the conduct of the Dardanelles campaign disastrously. By 1915 the security of the Channel ports had become vital for us, for if the Germans had been able to establish submarine bases

in those ports the food supply of London might have been gravely endangered, and it would have been very difficult to maintain our communications with France. Further, at that time the effect upon public opinion in France of a German advance in the West, which endangered the security of Paris, might have been disastrous. The security of the Western Front was therefore of supreme importance. There were, at home, those who assumed that the Western Front was secure, that the trench barrier was impenetrable by either side, and that a position of deadlock had been reached. But this was not the opinion of the French Commander-in-Chief, General Joffre. It was known that the Germans had created fresh reserves, and until it was known where these reserves were going, and whether the Germans intended to continue their offensive campaign against the Russians or not, there was always a possibility that these reserves might be sent to the Western Front, and might be followed by other troops from the East, if the Germans decided to change attack into defence in that theatre.[1]

In the early months of 1915 both the British and French armies had been much weakened by their efforts in 1914, both were short of munitions, and our new armies were not ready to take the field. If the Germans had elected to carry out another offensive campaign on the Western Front in the spring of 1915 the consequences might have been very serious for us. In short, at that time the Western Front was not secure, and therefore no subsidiary campaign should have been undertaken. We know now that General von Falkenhayn, who succeeded von Moltke as Chief

[1] Cf. *Official History of the War : Military Operations, France and Belgium*, 1915, p. 59 *et seq.*

of the German General Staff in September 1914, desired to send his reserves to the West and to carry out an offensive campaign on that front in the spring of 1915. He reluctantly, under pressure of circumstances, changed this plan, sent his reserves to the East, and adopted an offensive policy on that front, and a defensive policy in the West.[1] This was not known to the Allies until March 1915, but in the meantime the attack on the Dardanelles was begun on February 19th, and Lord Kitchener was urged to send troops, and in particular the 29th Division to support the Fleet. He refused to do this until the situation in other theatres of war was clearer, and to this refusal and the consequent delay in the despatch of troops the failure of the Dardanelles enterprise has been ascribed.

Mr. Winston Churchill's comment is: "During the 17th (February) it appeared that great pressure was put upon Lord Kitchener from General Headquarters not to divert the 29th Division from France. In fact, as has been justly observed by the official Naval historian, the use of the 29th Division became a cardinal issue between what was beginning to be called in our secret circles 'the Western' and 'the Eastern' policies. Lord Kitchener became the prey of those contending and opposing forces, and was plunged into a state of most painful indecision between them.

"So far not a shot had been fired at the Dardanelles, but we were on the eve of the attack on the outer forts. When we met in general council again on the 19th, it became clear that Lord Kitchener had

[1] Falkenhayn, *Critical Decisions of General Headquarters*, p. 56 *et seq.*

changed his mind. He informed us that he could not consent to the despatch of the 29th Division to the East. He gave as his reason the dangerous weakness of Russia and his fear lest large masses of German troops should be brought back from the Russian front to attack our troops in France. I cannot believe that this argument had really weighed with him. He must have known that, apart from all other improbabilities, it was physically impossible for the Germans to transport great armies from Russia to the French front under two or three months at the very least, and that the 29th Division—one single division—could not affect the issue appreciably if they did so." [1]

This comment seems to me to miss the point. It was not a question merely of sending one division to the East, but of engaging in a fresh military enterprise which might, and in fact did, make a heavy call on our resources. It was a breach of the principle of security to begin the Dardanelles campaign before it was reasonably certain that we should not require those resources to make the Western Front safe. To this breach the hesitations and delays which were a feature of the inception of that campaign were largely due. Hesitations, delays and sudden changes of plan are the usual consequences of a departure from principle. If we had waited until it was known that the German object in 1915 was an offensive campaign against Russia, and then made our object in that year the forcing of the Dardanelles by a combined naval and military attack, there is good reason to suppose that the campaign would have been successful.

This may appear to contradict what I have said about boldness in execution being the best means of

[1] Churchill, *The World Crisis*, 1915, p. 181.

obtaining security. Was not the bold course to accept the risk to the Western Front and to go for the great advantages which success in the Dardanelles promised? Was not the Dardanelles campaign as carried out "a legitimate gamble"? In 1862, when McClellan landed 110,000 men on the Yorktown peninsula, Lee had approximately 50,000 men immediately available for the defence of Richmond. Other Federal forces numbering about 70,000 men were preparing to converge on Richmond from the north and west, and against them the Confederates had about 21,000 men available. Each side then had a main army, the one attacking and the other defending Richmond, and each side had detachments elsewhere in Virginia. Instead of concentrating all his forces for the defence of Richmond, Lee used one of his detachments, that under Stonewall Jackson in the Shenandoah Valley, to attack one of the Federal detachments, and thanks to Jackson's brilliant generalship such alarm was created in Washington that the whole of McClellan's plans were deranged and he was eventually defeated by Lee. In this campaign Lee accepted great risks and obtained by boldness security which he could not have obtained by caution. For if he had concentrated around Richmond and awaited attack he must have been eventually worn down by the superior Federal forces. Why was boldness the right course for Lee in 1862, and premature for us in 1915?

I have said that boldness in action is usually the best course, given that the means are available. Means are not confined to numbers, they include superior mobility, superior generalship, and more favourable conditions of time and space. Now in 1862 Lee knew McClellan and was confident that he

could play upon his fears and outmanœuvre him, Jackson had given proof of the mobility of his force, and the conditions of time and space were in Lee's favour. The Federal forces were advancing on a wide arc, the Confederate forces were relatively centrally placed. Lee was operating on interior lines, the Federals on exterior lines. Risks which may be justifiably taken in the former case would be normally unjustifiable in the latter. In other words, it is more dangerous to make detachments when operating on exterior lines against an enemy operating on interior lines, than vice versa, and the commander of an army operating on exterior lines must take greater precautions before making detachments. He must be certain that the vitals of his army are sufficiently covered.

In 1915 the Allies were operating on exterior lines in respect to the Central Powers, Germany and Austria. The connection between our armies operating in France and that on the Gallipoli peninsula was by a long line of communication by sea; the connection between the German armies on the Eastern and Western Fronts was by a shorter line of communication by railway. That being so we had always to be ready to meet on the Western Front, which covered our vitals, any reasonably probable attack, and this had to be, or should have been, considered in planning any subsidiary campaign. The conditions of time and space being as they were, we could not reckon on being able to concentrate detached forces on the Western Front rapidly enough to meet a danger there. When in March 1918 the Germans made their great attack on our armies in France, we did endeavour to concentrate detachments from

Palestine and Salonica in France, but they did not arrive until the battles of the spring of 1918 were over.

In the Great War the various theatres of war covered a considerable portion of the globe, and the process of transferring our troops from one theatre to another was necessarily slow. When it required many weeks to bring troops from Palestine into action on the Western Front, the resisting power of troops requiring reinforcement had clearly to be much greater than when concentration could be made in a few days or even hours. The greatly increased delaying power of modern armies and the longer time required by a superior force to overcome an inferior force have altered the conditions of time and space within a single theatre of war in favour of the force operating on exterior lines, and risks which in the past were unjustifiable may be safely accepted to-day. We see then how much the application of this principle of security in the conduct of a campaign depends upon military knowledge, upon a careful calculation of means, and of the factors of time and space, and upon a just balancing of risks and advantages. It is never possible to say that this course is always right, that always wrong; each problem of security must be solved in the light of the actual conditions, but in accordance with the principles which I have here endeavoured to set forth.

I may summarise these principles as follows:

(1) Security must be the basis of a plan of campaign.

(2) Security in its broadest sense means national and not merely military security.

(3) Both statesman and commander must be satisfied as to the security provided by the original plan.

(4) In the conduct of a campaign the commander must be the sole judge of when risks are justified.

(5) The prime purpose of providing military security is to obtain freedom of action.

(6) An army the security of which is threatened loses its freedom of action and is obliged to conform to the enemy.

(7) Therefore when we can endanger the enemy's security before he can endanger ours, we provide for our security by forcing the enemy to conform.

(8) To do this successfully a careful calculation of means and the conditions of time and space is needed.

CHAPTER VI

THE PRINCIPLE OF ECONOMY OF FORCE

Object of economy of force concentration of superior power in battle—Calls on us for dispersion—Defence of Suez Canal in 1914—The balance between dispersion and concentration kept by economy of force—Bearing of principles of object and security on economy of force—The problem of detachments—Example of detachments by forces on interior and exterior lines—Change in the nature of superior power—To Napoleon this meant superior numbers of men—To-day it means superior fire power which is relative to power of protection against fire—The balance between offence and defence—Lee in 1862 the first to use trenches to increase power of attack—The Seven Days and Chancellorsville—Failure of French in 1914 to apply principle of economy of force—German successes due to this more than to superior numbers—Examples of armies which have acted on the offensive everywhere—The Germans in 1870—Possibilities of combination of increased delaying power of defence with increased mobility—Conclusions.

HAVING chosen a suitable object and made careful provision for security, the next obvious step is to dispose of our available forces that they may be employed so as to gain the object most quickly. I hope that we are agreed that the military object is still the defeat of the enemy's armed forces. If that is so, then, in thinking of these principles of war, we must have ever in our minds one event—battle. Foch begins his chapter on the Economy of Force with the words: "Modern war knows but one argument, the tactical fact, battle. In

view of this it asks of strategy that it should bring up *all available forces* together, and engage in battle *all these forces* by means of *tactical impulsion* in order to produce *the shock*." [1] This is merely an elaboration of the stock recipe for victory—concentration of superior force at the decisive time and place.

It is a wise assumption to make in war that the enemy is at least as sensible as we are. It is highly improbable that he will have committed himself to war unless he thinks that he has a reasonable chance of success. Without that he will, like the man in the Bible, send an embassy while we are still a great way off. Therefore we may take it for granted that in any great struggle we shall have no power to waste. It is reasonably certain that in the future, as in the past, we shall begin such a war with a small army, which will be gradually expanded. It is therefore of special importance to us that our available force should from the first be so employed as to make our power most effective. Even in a war of secondary magnitude, or in a small war in which our ultimate power is obviously superior to that of the enemy, it is important to conserve the national resources, to avoid useless expenditure of men, money and material, and the experience of centuries should have taught us that in this kind of war one of the greatest causes of waste is to be too weak at the outset of the campaign, for this invariably involves extravagant efforts to recover from initial mistakes. Therefore in every war, whatever its magnitude, the distribution of our forces so that the object may be gained most quickly is a paramount consideration.

This sounds so obvious as hardly to need statement. But in war it is usually extremely difficult to do what

[1] Foch, *Principles of War*, Chap. III.

is obviously right. We have seen that in any great struggle the fact that the interests of the British Empire are scattered over the globe makes it necessary to provide for the protection of those interests. Therefore while the attainment of the military object calls for concentration, the political and geographical conditions of the Empire call for dispersion. The ordinary peace distribution of our regular army comprises a whole series of detachments guarding various Imperial interests. We can never be in the position of continental Powers, which always have the bulk of their military forces concentrated to a far greater degree than we have. The outbreak of every war, therefore, finds us with detachments, and those often have to be increased to provide security. In November 1914, when we were struggling desperately to keep the Germans out of Ypres, and every man we could get was wanted on the Western Front, we had in Egypt more than 60,000 men, and this force, in view of the fact that a good portion of it was but partially trained, was by no means excessive, seeing that it had to guard the Suez Canal, 100 miles in length, against attack by the Turks, secure the western frontier of Egypt against inroads by the Senussi tribes, and maintain internal order in Egypt. If the Suez Canal had been cut, both the concentration of troops from India, Australia and New Zealand, and the shipment of supplies from the East and from the Pacific would have been greatly delayed. Therefore, in this case dispersal of force was necessary to facilitate concentration. This, while it is one of the most striking examples of calls upon us for dispersion, is but one example amongst scores of the same kind to be found in our military history.

Then within a single theatre of war every commander

finds himself called upon to make detachments for the purpose of reconnoitring the enemy and of obtaining information, to provide protection for his main body, and for his communications and base, to contain detached forces of the enemy, and to induce the enemy to make detachments. Therefore it is constantly necessary in war to hold the balance justly between the calls for dispersion and the need for concentration. This is one of the prime functions of generalship, and it is performed by applying correctly the principle of economy of force.

It will be clear from what has already been said, that the application of the principle of economy of force is much affected by the application of the principles of the object and of security. If the object has not been wisely chosen, and more especially if there is a multiplicity of objects, dispersion and waste of force follow almost inevitably. If a wrong direction is given to military operations at the outset of a war, it requires a great expenditure of power to recover from the mistake, and he is indeed fortunate who has such a reserve of power to fall back upon. It took the French and ourselves four years of tremendous effort to recover from the initial mistakes of the French plan 17, and during those four years almost the whole of Belgium and the greater part of north-eastern France were in the enemy's occupation. We have seen how the mistake of having two objects in 1915, when we were without the means to prosecute both, led to dispersion and waste of power. It is very rarely possible to foresee the end and extent of commitments once undertaken in war. No one in 1915, when the Dardanelles campaign was initiated, foresaw or could have foreseen that failure there would cause us to attempt prematurely to occupy Baghdad,

that this would in turn involve us in a long and costly campaign for the relief of Kut-el-Amara, or that the actual occupation of Baghdad in March 1917 would make it desirable in the autumn of that year to undertake an offensive campaign in Palestine. If the extent and nature of the commitments in which the Dardanelles campaign involved us could not have been foreseen, experience should have taught us that the end of such enterprises is never clear at the beginning. The idea which influenced many members of our Government, that the naval attack on the Dardanelles could be broken off at will, without involving us in anything further, was based on a misunderstanding of the nature of war. The choice of object, with due consideration of means, has then a very direct bearing on economy of force.

Similarly, we have seen how any mistake made in applying the principle of security is apt to lead to waste of power. If the statesman is not satisfied as to security, he may recall forces intended for the main military object to provide that security, as Lincoln did in 1862; if the commander does not secure his base and communications, he may find his whole plans deranged by a sudden and urgent call for protection; if in seeking security he miscalculates the conditions of time and space, he may find that his troops, or a part of them, are in trains travelling from place to place when they should be fighting, as von Moltke did at the end of August 1914. These all involve waste of power. The principle of security then also affects very directly the principle of economy of force.

But assuming that these first two principles have been applied correctly, there remains much to do to ensure that our forces are disposed to the best advantage.

First there is this matter of detachments. On this subject all writers upon strategy have had much to say, and there is nothing new to be said. A detachment provided for purposes of security should be sufficiently strong for its purpose and no more. If it is not sufficiently strong it may be a source of embarrassment, for a sudden call for help at a time when the commander of the main force has all his thoughts concentrated on battle with the enemy may have a very disturbing effect on his plans. On the other hand, any excessive provision of force for the purpose of securing distant interests is clearly wasteful.

A detachment which occupies a larger force of the enemy is clearly helping towards the concentration of superior force at the decisive time and place, and this is particularly the case when the detachment can be called into the main army more quickly than the enemy's corresponding detachment. The work of Stonewall Jackson's detachment in the Shenandoah Valley in 1862 is a classic example of the value of a detachment used in this way. In 1915 a comparatively small Austro-German force, reinforcing the Bulgarians, compelled a much larger Franco-British force to engage in a new campaign at Salonica.

In 1917 eight German divisions were sent to reinforce the Austrians on the Italian front, and so not only helped the latter to win a very important victory, but compelled the Allies to detach ten divisions from the Western Front.

These are all examples of detachments made by armies operating on interior lines, and, as I have said, it is much easier to employ detachments effectively in that case than when the army is operating on exterior lines, because the conditions of time and space are

favourable, for, given reasonably equal conditions of ground, it is always quicker to move along a diameter than round a circumference. I have not been able to find in the history of the American Civil War a single instance of the Federals, who were operating on exterior lines, having been able to use a detachment to occupy a larger detachment of the enemy, nor in the history of the Great War do I know of a case where we, operating on exterior lines, were able to make our detachments employ a larger force than we detached.

On the other hand, our experience in the Napoleonic wars shows that it is by no means impossible for armies operating on exterior lines to use detachments effectively. In those wars we and our allies were operating on exterior lines in relation to Napoleon's armies, and our little army in the Peninsula was, as I have said, of the nature of a detachment in relation to the war as a whole. Yet because we were able to use that detachment to keep alive Spanish and Portuguese resistance to the French, we were instrumental in keeping occupied in Spain French forces which greatly outnumbered the British troops employed.

The broad principle which should govern the use of detachments within a single theatre of war is that any detachment which cannot be made to influence the issue of the decisive action, that is of battle, is faulty. Therefore in dealing with each detachment it is proper to be constantly asking: "What is the object? How is this or that detachment helping to attain it?" Napoleon's advice is still very apposite. "The commander should several times a day imagine that the enemy has appeared in front, or on a flank, of the army and then ask himself what action ought to be taken. Should this cause embarrassment it would indicate an

error in the disposition which would have to be remedied at once."

This aspect of the application of the principle of economy of force does not vary materially from that propounded by Clausewitz one hundred years ago, which may be put in colloquial language as taking care that all parts of an army are pulling their weight. But a new aspect has arisen with the change that has taken place since Clausewitz's day in our conception of what this superior force, which we desire to concentrate at the right time and place, really is. To Napoleon it meant numbers of men, and more particularly numbers of infantrymen. This conception lingered on, as such conceptions are apt to, until it was out of date. It influenced the minds of soldiers right up to 1914, and was certainly in Foch's mind when he wrote his chapter on Economy of Force. I have quoted the beginning of that chapter, and will now quote its end:—"A conversation between Buonaparte and Moreau will illustrate this new conception of military mechanics. The meeting took place in 1799 at Gohier's, and Gohier relates it in the following manner. 'These two generals who had never yet seen each other seemed equally pleased to meet. It was observed that during this interview, both for one moment looked at each other in silence. Buonaparte was the first to speak; he told Moreau how anxious he was to make his acquaintance. "You are just come from Egypt as a conqueror," answered Moreau, "and I am just home from Italy after a great defeat." After giving some explanation of the causes of that defeat he concluded: "It was impossible to prevent our gallant army from being overwhelmed by so many combined forces. Big numbers always beat small ones." "You are right,"

said Buonaparte, "big numbers always beat small ones." "Still, General," said I to Buonaparte, "you have often beaten big armies with small ones." "Even in that case," he said, "the small numbers were always beaten by the big ones."

"'This led him to explain his tactics: "When with inferior forces I was met by a large army," he said, "having quickly grouped my own, I fell like lightning on one of the wings, which I routed. I then availed myself of the disorder this manœuvre never failed to produce within the enemy army, so as to attack it in another part, and again with all my forces. I thus beat the enemy piecemeal, and the ensuing victory was invariably, as you see, a triumph of the larger number over the smaller."'"

Foch concludes this quotation with this comment: "The art consisted in *securing the numbers*, in having the numbers on the selected front of attack; the means of doing this was *an economy of forces*."[1] The underlying idea here is the concentration of superior man power at the decisive point, and this idea dominated the conception of battle in our pre-war Field Service Regulations. They spoke of the gradual building up of a dense infantry firing line, a protracted struggle for fire superiority in which the infantry took a leading part, and then, fire superiority obtained, came the infantry assault in mass with the bayonet, which was the decisive act.

But the Great War taught us that what was needed was not superior man power but superior fire power, and we find consequently a very different conception of the battle in mobile warfare in the present Field Service Regulations. Sec. 64, 5 says: "The infantry

[1] Foch, *Principles of War*, p. 95 *et seq.*

detailed for the attack will be assembled and move forward to the attack at an arranged time known as 'zero.' The leading troops must move as closely as possible under the protection of the artillery fire, and by this means drive home their attack." This method is further elaborated in Section 65. Massed fire has therefore taken the place of massed bayonets. This in its turn leads us to another aspect of the application of this principle of economy of force. Fire power is relative to power to protect oneself against fire. Infantry in defence armed with the best rifles and the best machines are of little value, whatever their numbers, if they are prevented from raising their heads to fire by the volume of the enemy's artillery fire. Equally infantry in attack will only be mowed down if they advance before the enemy's machine-gun and rifle fire has been beaten down. Natural cover, trenches, armour, and the counter-fire of guns may all be used to neutralise attacking fire. But they may also all be used to economise force with the object of increasing the power of attack. Therefore a just appreciation of the balance between offence and defence, of how and when to use either or both, is essential to the application of the principle of the economy of force and to the concentration of superior force at the decisive time and place.

Wellington was a fine exponent of how the interdependence of attack and defence should be exploited, but neither he nor anyone of his period employed trenches as an aid to this in field warfare. His famous lines of Torres Vedras were rather an application of the principle of security than an attempt to economise force in defence for the benefit of attack. These lines covered his base at Lisbon, and gave him a safe refuge

should he be forced, as he was, to retreat through Portugal, and were of a semi-permanent nature. They are easily traceable to-day. The elaborate lines constructed by Marlborough's opponents in the Low Countries, Villeroi and Villars, were used purely for defence, and the first commander in war to use trenches as an aid to manœuvre in attack was Lee in 1862. I have already explained that at the beginning of the campaign of that year, in the month of March, the Federals had about 180,000 men in and on the borders of Virginia, to whom the Confederates could only then oppose 71,000. By the third week in June the brilliant manœuvres of Jackson's detachment in the Shenandoah Valley had taken effect and had resulted in the dispersal of the reinforcements intended for McClellan's army in front of Richmond. By that time too Jackson had been brought in secretly and swiftly to join Lee about Richmond, and reinforcements had come in from other Confederate States. Thus on June 24th Lee had around Richmond some 87,000 men confronting McClellan's army of 109,000. This, while it was a vast improvement from the point of view of the Confederacy on the situation in the previous March, was still far from giving Lee of itself superior force at the decisive time and place. His method of achieving this is still most instructive, and has from our point of view this special interest, that from the time when Jackson joined him, until the end of the battles of the Seven Days, he ceased to derive any advantage from operating on interior lines.

McClellan's army confronting Lee's entrenched lines round Richmond was divided by the river Chickahominy. He with his main body of 75,000 men was south of the river, while his right wing numbering

34,000 under Porter lay on the northern side. Lee, issuing from his entrenchments and joining Jackson, who came up on his left, attacked Porter with 59,000, leaving 28,000 in the entrenchments south of the river to confront McClellan. Thus with an inferiority of approximately 3 : 4 on the whole front of battle Lee obtained a superiority of 12 : 7 at the point which he had chosen for his decisive effort. The result was a victory which compelled McClellan to abandon his campaign against Richmond. This is, I believe, the first example in modern military history of the use of entrenchments as an aid to the application of the principle of economy of force. They were on several other occasions during the war used by Lee to like purpose, notably at the battle of Chancellorsville. Towards the end of April 1863 Lee with a Confederate army of some 56,000 men confronted a Federal army of 133,000 men under the command of Hooker. The two armies were divided by the river Rappahannock on either side of the town of Fredericksburg. The Confederate position on the Rappahannock was strongly entrenched. On April 27th Hooker, leaving a force of 27,000 opposite the Confederate lines at Fredericksburg, moved the bulk of his army up the Rappahannock, crossed the river, and on the night of April 30th he had 52,000 men assembled in the woods of Chancellorsville, threatening Lee's left and rear, and he had considerable reinforcements within call. To meet Hooker's manœuvre Lee had left 10,000 men in the lines about Fredericksburg confronting the 27,000 Federals, and had marched with 46,000 towards the Chancellorsville Woods. He had information that the Federals were preparing defences within the woods, and therefore the assumption was

that Hooker was awaiting the arrival of his reinforcements before attacking. That night Lee decided to leave only 15,000 men strongly entrenched to hold Hooker's front, and he sent Stonewall Jackson with 31,000 to march round Hooker's right and attack that flank, which he had discovered was exposed. Jackson executed his task brilliantly, falling at the moment of victory. The Federal right was rolled up and Hooker forced to retreat across the Rappahannock. Again Lee, though greatly inferior in force, had been in superior strength at the point where he had chosen to make his decisive effort, and again he had achieved this by using field defences to enable him to economise force for the benefit of attack. At Fredericksburg 10,000 men in trenches kept 27,000 Federals occupied, and at Chancellorsville 15,000 men behind defences engaged the attention of 52,000, while 31,000 Confederates fell on Hooker's flank corps 11,000 strong.

It was long before the lessons to be drawn from Lee's employment of defences to assist manœuvre were learned. The Boers taught us something in 1899 of the uses to which trenches could be put, the Russo-Japanese War still more, and our Field Service Regulations of 1914 did emphasise the containing power of entrenchments, and the importance of correlating offence and defence. Our infantry regularly practised entrenching and was equipped with picks and shovels; but the views held in the army of our Allies, the French, on this matter were in 1914 entirely different.

There has been a great deal of criticism of the French plan 17, which was unquestionably a disastrous failure. But I am not at all sure that this failure was due, as has been sometimes suggested, to the way in which the French armies were deployed at the beginning of the

war, or even to the decision to undertake an offensive into Alsace-Lorraine. Given the fact that the French Government would not permit any of its soldiers to enter Belgium and Luxembourg until invited to do so by the Governments of those countries, I have found it difficult to design a scheme of deployment for the French armies which differs materially from that in plan 17. In my judgment the fault of the plan lay in the doctrine and the object which were behind it. The reasons for this were in the main psychological. The defeats of 1870–71 had naturally depressed the French people and their army, and the prime object of the military leaders of France in the years which preceded the Great War was to restore confidence and an offensive spirit. A study of the history of the war of 1870–71 by the French led quite rightly to the conclusion that victory had not been due to any very exceptional generalship or fighting capacity on the German side—the Germans made many mistakes both in strategy and tactics—but rather to an excessive reliance by the French generals on the virtues of defensive positions and to defects in preparation. In the revulsion against this the pendulum swung to the other extreme. The value of attack was sedulously preached and no reference was made to the value of defence. The French infantry was neither trained in nor equipped for digging. Gallantly led and as gallantly following, the French, in the early battles of the war, attacked everywhere and suffered enormously in consequence. No attempt was made to balance offence and defence, and one of the best means of obtaining that economy of force which Foch had so sedulously preached was neglected by himself as well as by other leaders of French military thought.

Despite the military advantage which the Germans obtained by the invasion of Belgium—I have referred elsewhere to the moral and political consequences of that act—there does not seem now, looking back at events in the light of after knowledge, to have been any reason why the long and exhausting retreat of the Allied left wing and the consequential devastation of a great part of north-eastern France should have been necessary, if in the French plan defence had been judiciously mingled with attack.

After deducting the detachments which the Germans left behind them in Belgium, the approximate strength of the opposing forces at the time of the battle of Mons were—Germans 1,450,000, Franco-British, 1,150,000. There was here no overwhelming superiority. On their right at the time of the beginning of their offensive in Alsace-Lorraine the French had in their Ist and IInd Armies 490,000 men opposed by 340,000 Germans of the VIth and VIIth Armies. On the centre the French IIIrd and IVth Armies were approximately equal to the German IVth and Vth Armies. On the Allied left and the German right at the time of the battle of Mons, the French Vth Army and our Expeditionary Force numbered 340,000 and were opposed to the Ist, IInd and IIIrd Armies, numbering (less detachments in Belgium) 720,000 men. Thus on their right in Alsace-Lorraine, where the French had decided to make their main effort, they were as 10 : 7; while the Germans on their right were more than 2 : 1. The German left, by use of strongly entrenched positions, was able to shatter the French attack, drive it back to the frontier, and at the same time economise force for the benefit of the offensive wing. It has been said, as I have mentioned, that von Moltke did not do this

sufficiently, but it is, I think, clear that the Germans showed a better appreciation than did the French of the importance of the use of defence in economising force for attack, and to that better appreciation rather than to any overwhelming superiority was due their early success on the Western Front.

For the French made no attempt to act defensively anywhere. They attacked with their Ist and IInd Armies in Alsace-Lorraine. They attacked with their IIIrd and IVth Armies in the Ardennes, and they were proposing to advance offensively with their Vth Army across the Sambre, when they were attacked and thrown on the defensive. Actually up to the early hours of August 23rd it was our intention to cross the Condé Canal in co-operation with the offensive of the Vth Army, and we had only very short notice that we were to stand on the defensive. Our defences were therefore but hastily prepared, and many of the bridges over the canal could not be destroyed in time. In spite of this, some four and a half British infantry brigades held up the attack of four German divisions during the greater part of August 23rd, and of a fifth division which came into the battle late in the day. This is some indication of what might have happened if Joffre had decided to hold the Sambre and Meuse defensively on his left, where in addition to the troops in the field he had the fortresses of Namur and Maubeuge to help him. It seems reasonably certain that in that case the German advance on their right would have been so slow that the French Commander-in-Chief would have been able to make, near the frontier, the readjustments in his dispositions which he eventually made in time for the battle of the Marne. It is true that the French plan was based upon an under-estimate of the German

strength, in that the French did not appreciate the quality of the German reserve corps. But the cases must be very rare in which one side is so superior that it can afford to neglect the principle of economy of force, and even on their own estimate the French had not that degree of superiority. To-day the application of this principle means something more than merely throwing all available troops into battle. Offence without defence is usually extravagant of force, just as defence without offence is always weak.

But, it will be said, there have been many examples in military history in which one side has acted continuously on the offensive everywhere, and has been victorious. There have been cases where the superiority in power has justified this, notably in the Austro-Prussian War of 1866, in which the issue was decided in the single battle of Königgrätz. In the Franco-German War of 1870–71 the Germans acted everywhere on the offensive, and within a few weeks had defeated the French regular armies in the field. The impression created by this rapid and overwhelming success had great influence upon military thought for the next generation, and doubtless contributed to that passion for the offensive everywhere and at all costs with which the French entered upon the Great War. But the German victories were due more to defective organisation and preparation for war and to false conceptions of strategy and tactics on the part of the French than to German generalship. The Germans began the war by invading France on two lines of operation, one in Lorraine, the other in Alsace. On each line they had assembled forces as large as the respective lines of communication could conveniently support. The Lorraine armies were directly under German Head-

quarters, the Alsace army under the Prussian Crown Prince. The two groups were separated by the mountain range of the Vosges. The French were also in two groups, their main army in Lorraine being directly under the Emperor Napoleon III, their Alsace army was under the command of Marshal MacMahon. They had a detachment of an army corps at Bitsche in the pass of the Vosges connecting the two groups. The Germans believed they were in sufficient superiority to be able to attack on each line, and in fact on August 6th they defeated MacMahon in the battle of Wörth and the French Emperor in the battle of Spicheren.

Now let us suppose that the French had remembered Napoleon's statement that operations on two lines simultaneously are usually a mistake, and on discovering the initial German movements had decided to hold the Germans on one line and attack them on the other.[1] MacMahon had on hearing of the German advance called in the Bitsche corps, with the exception of a detachment ordered to Lorraine. The corps arrived too late for the battle of Wörth and was useless in either of the battle-fields of August 6th. If, however, MacMahon had, instead of merely occupying a defensive position at Wörth, which had considerable natural strength, entrenched that position, he could with reasonable certainty not only have held up the Crown Prince's attack, but have economised troops for the advantage of the Lorraine army. In that case he might have reinforced the Bitsche detachment, instead

[1] The conditions of time and space had changed greatly between the beginning of the nineteenth century and Napoleon's day, and the telegraph had by facilitating communication made operations on two lines far less dangerous and easier to combine. Still, such an application of the principle of economy of force, as I have suggested, was applicable to the French situation in 1870.

of calling it in, and the detachment so reinforced might have fallen on the German flank at Spicheren and brought about a French victory. All this would have been well within the bounds of possibility had not the French commanders been worried by defects in organisation and preparation to an extent which precluded clear thinking on strategy. If all this had happened we should all have been criticising German generalship in the years which preceded the Great War instead of holding it up as a model. In discussing these principles of war and their application I am necessarily confining myself to their effect upon leadership. But leadership, though it is much, is not everything. Superior organisation and preparation, and above all the sense of confidence and of moral superiority which these give, have a great part in the issue of war.

Since 1862, and even since 1914, the delaying power of infantry has very greatly increased owing to the development of machine-gun fire, and therefore the opportunities of using defence to economise force for attack are increasing. The latest example which military history gives us of the method adopted by Lee in 1862 is afforded by Allenby's attack on the Turkish lines of September 19, 1918, the attack which began the battle of Megiddo. By September 18th Allenby had secretly massed on a front of fifteen miles on his left, where he had determined to make his decisive attack, 35,000 infantry, 9000 cavalry, and 383 guns, and these were opposed by 8000 infantry and 130 guns. On the remaining forty-five mile front some 22,000 men and 157 guns held the line, opposed by 24,000 Turks with 270 guns. This concentration at the decisive point practically decided the issue of the battle before a shot was fired.

When we consider that this increase in delaying power of infantry entrenched and on the defensive has been simultaneous with a great increase in the mobility and offensive power of mechanised forces, it is clear that a combination of these two forms of power opens up possibilities of manœuvre such as no general has yet disposed of in war. How much simpler would Lee's problem at Chancellorsville have been had Jackson's corps been mechanised. The forms of power have changed and are changing. To Napoleon it meant man power and the shock of the bayonet charge in mass, to us to-day it means fire power combined as opportunity offers with the shock of tank attack. But the fundamental method of making power decisive remains the same, it is still by economy of force that superior fire power is brought at the right time to the right place, just as it was by economy of force that superior numbers were brought to what Napoleon called *le dénouement.*

We must not then think of war as comprising attack everywhere on our side, defence everywhere on the other. As sec. 25 of the Field Service Regulations, II. says: "It must not be assumed that during the course of a single battle one force will invariably attack and the other remain continually on the defensive. In every battle, especially when large forces are engaged, there will usually be many alternations of attack and defence. Both opponents may endeavour to strike the first blow, or one may await the attack of the other with a view to seizing a more favourable opportunity for offensive action later. In fact each commander will employ offensive or defensive action to suit his immediate requirements, the defensive being resorted to when and where it is required to delay a

decision, the offensive when it is desired to obtain one."

What applies to tactics, that is, the conduct of battle, applies equally to strategy, that is, the conduct of manœuvre, and this intermingling of attack and defence is a feature of both. The fixing of the right proportion of each is one of the elements of the application of the principle of economy of force.

We may now summarise these elements as comprising:

(1) The choice of a single and appropriate object.

(2) Due provision for security.

(3) A correct application of the use of detachments.

(4) A correct appreciation of the power of defence to release force for offence.

CHAPTER VII

THE PRINCIPLE OF CO-OPERATION

The organisation of Government and national co-operation—Co-operation between the Services—Co-operation between Navy and Army—Examples from our past history—Co-operation in the Dardanelles campaign—The need for mutual understanding—Combined naval and military operations—Co-operation between Army and Air Force—Co-operation within the Army—The Regular Army only the advanced guard—Difficulty of obtaining co-operation with a hastily expanded army—Supreme importance of training for this—Our difficulties in obtaining co-operation—Conclusions.

The Field Service Regulations say of this principle: "It is only by effective co-operation that the component parts of any force or of the nation can develop the full measure of their strength. In order that this co-operation may be effective, each must know the capabilities and limitations of the others and apply this knowledge in giving and demanding assistance." [1] "The component parts of any force or of the nation"—let us take the larger problem first and deal with the component parts of the nation. We have seen already that policy and strategy must be in accord, and I have already said so much on that subject that I cannot here usefully say more without embarking on a discussion which would require a book to itself. I will

[1] F. S. Regs., II. 8. vi.

only add that to ensure effective co-operation between the parts of the nation it is necessary to have ready for instant use in emergency an organisation of Government for war. During the Great War we discovered that our ordinary system of government in time of peace by a Cabinet of some twenty members, each jointly and severally responsible to Parliament, and each authorised to propose solutions for any question which may come before the Cabinet, is unworkable in time of war. Sir William Robertson tells us that in the early days of January 1915 six different plans reached and were discussed by the Cabinet. "Over and above this bewildering shower of proposals and projects, emanating respectively from the First Lord of the Admiralty, the Secretary of the War Council, the Chancellor of the Exchequer, the French Commander-in-Chief, the British Commander-in-Chief, and the First Sea Lord, the Government of India, under the auspices of the Secretary of State for India, had commenced operations at the head of the Persian Gulf, and their extension up to Baghdad, some 500 miles from the Gulf, was already mooted. These rival policies and plans, uncontrolled by any master hand, and never discussed by the War Council in terms of available means, continued to jostle each other in the Council's deliberations." [1] Such methods were found by bitter experience to be ill adapted to obtaining effective co-operation by all the parts of the nation, and we slowly and painfully arrived at the solution of placing the political conduct of the war in the hands of a small War Cabinet composed of Ministers, who, being without responsibility for the administration of particular departments of Government, could give

[1] *Soldiers and Statesmen*, Robertson, Vol. I., op. 83.

their whole time to the task. It is, I think, now recognised that in any great national emergency we require a scientifically organised General Headquarters of the Empire in which statesmen and the heads of the fighting services have their allotted functions. This in one form or another must be the prime means of ensuring co-operation on a national scale.

Passing onwards in our survey we come next to co-operation between the Services. This, as we have seen, is assured for the future to a degree which has rarely, if ever, obtained in the past, by the creation of the sub-committee of the three chiefs of staff. But co-operation at the top, while it is much, is by no means all, it must run right through the Services, and " is only obtained when each knows the capabilities and the limitations of the others."

I will take first co-operation with the navy. While the army cannot move from these shores without the help of the navy, the navy needs the army to protect its bases, and cannot by itself alone bring a campaign to a conclusion. It required the Peninsular War and Waterloo to complete Trafalgar, and the complement of Jutland, the surrender of the German Fleet at Scapa Flow, was due to the combined effect of the blockade of Germany and the defeat of her armies. This inter-dependence of army and navy has been of recent years admirably dealt with by the late Sir Charles Callwell in his *Military Operations and Maritime Preponderance*, and by Majors Pargiter and Eady in *The Army and Sea Power*. From a study of these books it is evident that we have made some progress in the direction of mutual understanding and co-operation between the two Services. At least one half of the combined naval and military enterprises which we undertook in the eighteenth

century failed, either because of the jealousies between the Services, or because of mutual ignorance of each other's needs, or because of ignorance at home of the requirements of such expeditions. It is not necessary to look deeply into the causes of the failure of our expedition to Corsica in 1794, when we read that the military commander, General Dundas, spoke of the naval commander, Lord Hood, as "a man who never reasoned himself nor would he listen to reason from others," [1] and further, that Nelson, who commanded a ship in the expedition and lost his eye in the attack on Capri, wrote of Sir John Moore, then a colonel, "I wish Moore were a hundred leagues away."

Our most conspicuous successes in this period were obtained by military commanders of exceptional ability and tact, such as Abercromby in the landing at Aboukir Bay, and Wolfe at Louisburg and on the St. Lawrence. But both these great generals had, we find, ample time at their disposal to overcome defects in equipment and organisation, and to train their soldiers to co-operation with the navy. Abercromby spent nearly two months equipping and training his men in the Bay of Marmoras, an arm of the Gulf of Makri which lies on the coast of Asia Minor opposite the island of Rhodes. He arrived there on January 2, 1801, and began his landing at Aboukir on March 7 of that year. Sir John Moore tells us how the time was spent:—"The Commander inspected the regiments and brigades separately. He gave praise where it was due, and was severe in his animadversions wherever he observed carelessness or inattention. He became thus acquainted with the state of every corps and the character of its commander. Discipline was improved

[1] *Diary of Sir John Moore*, Maurice, Vol. I. p. 68.

and emulation excited. . . . The troops, particularly those intended for the disembarkation, were placed in the boats in which they were intended to disembark, and arranged with the guns in their proper order, and the landing was practised several times in the order in which it was afterwards executed." [1] The result of all this training was that the landing went like clockwork, and an enemy observer wrote of it: "Their debarkation was admirable. In less than five or six minutes they presented 5500 men in battle array. It was like a movement on the opera stage." [2]

That the time which Abercromby required to produce this result was not excessive is shown by the reply which Sir John Moore made to a French criticism of the delays at Marmoras. "A French general," says Moore, "may be excused for ignorance of what retards maritime expeditions, and still more of the causes of delay to which British expeditions are exposed. The military expeditions of France have during this war been planned by military men, frequently by the very generals who were to execute them, who knew and took care to provide what was necessary. The military operations of Great Britain have been directed by Ministers ignorant of military affairs and too arrogant and too self-sufficient to consult military men. Sir Ralph Abercromby, when he received his orders at Gibraltar to attack Egypt, had from 14,000 to 15,000 infantry and artillery, 250 dismounted cavalry or artillery, and not a waggon or the means of conveying an article a yard from the beach. In short, there was the soldier and his sword and, these provided, he was ordered to take the field and undertake sieges. He was

[1] *Diary of Sir John Moore*, Vol. II. p. 56.
[2] *Military Operations and Maritime Preponderance*, Callwell, p. 358.

without any information with respect either to the force or to the disposition of the French army, except what was contained in intercepted letters." [1]

One would be disposed to think that all this was of the dead past were it not that almost parallel conditions of affairs occurred when in March 1915 Sir Ian Hamilton was sent out to command the military forces at the Dardanelles. He left England without any administrative staff, and with the exception of some brief instructions from Lord Kitchener, a pre-war Admiralty report on the Dardanelles defences, and an out-of-date map, he had no information whatever. Further, the one British regular division which was to take part in the enterprise, the 29th, was embarked without consideration of its probable rôle on arrival. That division had sailed in twenty-two transports. "The ammunition was in one ship, the transport in another, the harness in a third, and the machine guns at the bottom of the hold, and so on." [2] Consequently the military force intended for the landing had to be transported from Lemnos to Alexandria, there to undergo a lengthy re-organisation in preparation for the landing.

Now the delay which Sir Ralph Abercromby found necessary for preparation might have proved fatal to success. In fact it did not, partly owing to the negligence of the French commander in Egypt. But between 1801 and 1914 the conditions of time and space had changed radically. Information travelled incomparably faster, troops could be moved far more rapidly, and therefore delay was far more dangerous. In these times there can rarely be a margin of time after an expedition has put to sea in which to make good

[1] *Diary of Sir John Moore*, Vol. II. p. 57.
[2] *The World Crisis*, 1915, Churchill, p. 239.

defects of preparation, therefore the kind of preparation necessary for a combined naval and military operation, the needs of the soldiers and the requirements of the sailors, must be so well understood by both that mistakes of this kind become impossible. If this degree of perfection in preparation is to be reached, both soldiers and sailors must take all and every opportunity to get to know and understand each other. This is a serious task, and one which cannot be begun too soon. Most British army officers are at some time or another in their careers quartered at a naval port. There then is the opportunity, and we have not all of us made the most of it in the past. Knowledge on these matters cannot be safely left to the War Office and Admiralty and to the Government in general, for, apart from the fact that it is more likely to prevail amongst these high authorities if it is general in navy and army, naval and military expeditions have in the past sailed from many a port outside the British Isles and have had to be prepared by the men on the spot, while execution calls for mutual understanding by officers of all ranks in both Services.

The story of the Dardanelles landings has many lessons for us which require careful consideration. Writing in 1905, Sir Charles Callwell issued a note of warning against the increasing risks of attempting landings in face of opposition. "In the days of Abercromby," he says, "muskets only carried one hundred yards or so; grape began to lose its effect at a range of over a quarter of a mile; round shots and shell, the only projectiles of any use beyond that distance, had no great terrors for troops in boats. Under the conditions then obtaining, landing parties only suffered serious loss when close to shore, and when actually disembarking and advancing to the attack. A

moment's consideration serves to show how completely the great advance which has taken place in the science of armament has transformed the tactical situation, when an army endeavours to force its way ashore in face of opposition under modern conditions." [1]

The story of our first landings at the Dardanelles amply confirms this warning. The power of armaments in defence has increased since Callwell wrote and is increasing, while the only covering fire which a military force can obtain during a landing is that provided by naval guns. These, while they too have greatly increased in power and range, are still from the nature of their trajectory unsuited to beat down the fire of troops entrenched. Therefore infantry attempting a landing cannot expect to receive from the navy the kind of co-operation which it obtains from its own artillery in attack. A landing in face of opposition is therefore only justified when a reasonable degree of surprise is assured, and when there is time for careful preparation. During the battle of Passchendaele in 1917 it was proposed to attempt a landing on the Belgian coast in rear or on the flank of the German lines. For that enterprise the most elaborate preparations were made to ensure co-operation with the Navy and Air Force, the special training of troops, and above all secrecy.[2] The troops intended for the landing were segregated in a special camp, and stringent precautions were taken to prevent information of what was afoot leaking out. A replica of the coast on which the landing was to be attempted was constructed in the camp, and the whole procedure was

[1] *Military Operations and Maritime Preponderance*, p. 358.

[2] For an account in detail of these preparations see *Life of Lord Rawlinson*, Maurice, p. 195.

carefully rehearsed. The actual training of the force took a month, and the preparation of the special naval vessels required considerably longer. The landing was never attempted because our attack on the German lines in the battle of Passchendaele had not progressed sufficiently far to warrant it, but the preparations made are an indication of the care and forethought necessary to ensure effective naval and military co-operation in what is the most difficult and risky operation in war.

This does not mean that we should normally confine landings to harbours undefended by the enemy. It may well happen that all suitable harbours are watched and defended, and it would limit the exercise of the special nature of our power unduly if we are to land in future only where a harbour is available, but the security of a suitable base must normally be the first object of the force when landed. This has been the case in the past and is more than ever necessary to-day, because the requirements of a modern army, for any but a very short period, are far too numerous and complicated to be landed on an open beach. Sir Arthur Wellesley began his campaigns in the Peninsula by landing in the estuary just south of Cape Mondego, his immediate object being to secure the harbour of Lisbon. In the Crimea we landed on an open beach, north of the fortress of Sebastopol, and then marched round the fortress to secure the harbour of Balaclava on the south side. In 1904 the Japanese made their first landing on the coast of the Liaotang peninsula, and then secured the bay of Talienwan as a base. Even when a landing on an open beach is unopposed, a very high degree of mutual understanding and of co-operation between Army and Navy is essential. Time is usually of the greatest importance,

for the troops when landed must at once obtain elbow-room, which in turn requires the prompt landing of necessary ammunition, stores and supplies. Farther, above all operations of war a landing is dependent upon weather, and the duration of favourable weather is always uncertain.

Co-operation between Army and Air Force has not the historical background and the wealth of experience which is behind combined naval and military operations, but it is certainly true to say that the interdependence of the two Services is greater than is the case with Army and Navy. I have said that it seems probable that the Air Force will be able to go a long way towards solving for us the problem of small wars, and we know that the Air Force is to-day charged with the defence of Iraq, Palestine and Aden. But in such cases the Air Force requires from the Army protection for its aerodromes and bases, and since it is unable to occupy hostile territory it would usually require military assistance to follow up and confirm the effect of its attack.

The air defences of Great Britain are in peace-time controlled by an Air officer Commanding-in-Chief, and presumably would be so in war, but here too the Air Force requires the assistance and co-operation of the Army in providing ground anti-aircraft defence. During the latter part of the Great War an independent Air Force was formed and used for air attack upon Germany. The formation of such a force in future wars is a matter for the decision of the Government, and must depend upon the object of the war and upon the extent to which an independent Air Force can contribute to its attainment. But here the same principle applies as to air attacks upon communications.

Normally the operations of an independent Air Force must, if they are to be effective, be co-ordinated with the operations of the other Services, and so timed that the latter can follow them up at once and take immediate advantage of them. That being so, it would appear that an independent Air Force, other than for home defence, should only be created when Army and Navy have been provided with all aircraft that they can possibly use. Failing that, better results would be obtained by increasing the air power of the Army and Navy than by attempting independent operations.

The dependence of the Army upon the Air Service is obvious, and is recognised by the fact that the aircraft operating with an army become a constituent part of it and are under the command of the military Commander-in-Chief. The co-operation of the Air Force is required by the Army both in strategy and in tactics. The strategical functions may be summarised as the attainment of air superiority, strategical or distant reconnaissance, the interruption of the enemy's communications, and pursuit; the tactical functions are tactical reconnaissance, observation of targets and of fire for the artillery, low flying attack, and intercommunication. It is obvious that all these require from the Air Force a high degree of understanding of the needs and methods of the Army, and on the part of the Army of what the Air Force can and cannot do. Unfortunately for the full attainment of this understanding and co-operation, the responsibilities of the Air Force for other duties than co-operation with the Army are heavy, and are tending to increase. It has been found to be as effective and more economical to allot to the Air Force certain of our outlying responsibilities, and the Air Force, as I have said, is now charged

with the defence of Iraq, Palestine and Aden. Then the requirements of home defence against air attack make a serious call upon our air resources, which has not yet been fully met. Further, the air needs of the Navy have to be met as well as those of the Army. At the present time, out of an establishment of 65 regular squadrons, 25 are required for home defence, 12½ are provided for the Navy, and of the Air Force abroad a considerable portion is required for the defence of the territories which it administers. This leaves only five squadrons at home, four in India, and one in Egypt, definitely allotted for co-operation with the Army in time of peace. When we remember that a large part of the Army is necessarily quartered in stations where there are no aircraft, it is clear that it is very necessary to make the very most of limited opportunities.

Turning now from the three Services to the Army, the first thing to be realised is that the Regular Army is but a part, and a very small part at that, of the power of the Empire. One of the many things in the Great War which astonished both ourselves and the world in general was the demonstration which it afforded of the military power of the Empire. We had always thought of ourselves, and the world had thought of us, as a great naval Power, very few had conceived of the possibility of our becoming at the same time a great military Power. In August 1914 the strength of the Regular Army with the colours was 243,000, the total number of soldiers employed by the Empire in the war was 8,975,954; of these the British Isles provided 4,970,902, the Dominions 1,413,864 and India 1,679,998. The total number of regular British divisions employed in the war was eleven, and Canada, Australia, and New Zealand provided the

same number out of a total of 104 divisions raised. The regular British Army was then, and is now, but a weak advanced guard of the potential military power of the Empire. The main body of the Imperial Army consists of the Territorial Army, which is now the recognised means of expanding our military forces at home, and of the forces of the Dominions and of India. This being so, the importance of aiding the training of the main body in every possible way as opportunities occur needs no emphasis.

Having thus sketched the outlines of co-operation in war of the component parts of the Empire and of the nation, we come next to co-operation of the component parts of any military force, which means, of course, co-operation between the various arms—cavalry, artillery, engineers, infantry, tanks, and signals. Each, as the Field Service Regulations say, must know the capabilities and limitations of the others, and apply this knowledge in giving and demanding assistance. The attainment of this degree of co-operation is one of the prime objects of all higher training. It is this higher training which makes an army out of a collection of cavalry regiments, batteries, and infantry battalions. These cannot be an army, however efficient each is at its own job, until they have learned to work together. Much of the history of the Great War is incomprehensible unless this is kept in mind. Tremendous as was the expansion of our little Regular Army during the years 1914–18, the business of shaping the expanded forces into an Imperial Army, of which all the component parts could work together effectively, was still more tremendous, and on the Western Front this was one of Lord Haig's chief preoccupations during the period in which he was Commander-in-Chief.

The heavy fighting in France and Belgium during the first months of the war greatly reduced our already limited supply of trained officers and non-commissioned officers, the constant and perfectly natural demands of the French that we should take over more and more of the line as our armies expanded, the constant drain of trench warfare during periods during which no battles were fought, and the continual necessity for the relief of exhausted units during battle, all made it extremely difficult to find opportunities for combined training, and without that training the splendid material which the Empire furnished could not be made into an army.

Many of the German leaders have in their books on the war made unfavourable comparisons between our fighting on the Western Front, and that of the French in 1915. Von Falkenhayn, for example, writing of the period after the first battles of the spring of that year, says: "In the long struggle on the Western Front the French had proved themselves to be the more dangerous enemy compared with the English. They (the English) certainly did not suffer from a shortage of men. On the other hand, however, they had difficulties with recruiting and still greater with training of these men, owing to their lack of suitable officers and N.C.O.'s. In any case, the English, in spite of undeniable bravery and endurance on the part of individuals, had proved to be so clumsy in action that they could afford no prospect of accomplishing anything decisive against German troops in the immediate future." [1] That is, on the whole, not an unfair criticism; there definitely was failure in tactical skill and combination on our part of the Western Front in 1915, because these cannot be learned quickly by an army which has been

[1] *General Headquarters*, 1914–16, Falkenhayn, p. 73.

rapidly expanded. The men of 1918 who drove the Germans from the Somme to Mons were no better than the men of 1915 and 1916, but the armies of 1918 on the Western Front had attained to a degree of co-operation and of tactical skill which those of the earlier years did not possess. Victory on the Western Front was not due merely to increased numbers, better equipment, and a more liberal supply of munitions, though these all contributed; it was in the main due to the fact that the component parts of the armies had learned to work together.

One of the best examples on our side in the Great War of effective co-operation by the component parts of an army is furnished by the battle of Gaza–Beersheba, fought from October 3rd to November 7th, 1917, on the southern frontier of Palestine. The reasons for that success are to be traced to the conditions which prevailed in that theatre of war. Of the seven divisions and three cavalry divisions which took part in that battle, none had been seriously engaged since the middle of the previous April, when the second battle of Gaza had been fought, and only four divisions had suffered serious losses then. The demands of trench warfare were trifling in comparison with those of the Western Front. The consequence was that there was no constant loss of experienced men, no constant inflow of half-trained recruits, and there was ample opportunity for training, with the result that when the time for battle came, all parts of the army went about their business confident in themselves and in each other.

The art of co-operation between the component parts of an army is then best learnt by training in combination, but the British Army suffers in comparison with continental armies by lack of opportunities for this.

We have made a great advance in this respect during the last twenty years. Up to the time of the South African War our army at home was quartered in districts, without any consideration of the formations in which it would go to war. Now both at home and in India the army is organised and trained in the brigades and divisions in which it would fight. But while this is the case in almost the whole of the armies of the Continent, we still have to keep a considerable part of ours in stations overseas, where opportunities for any form of combined training either do not exist or are very scanty. Even in Great Britain, where the greater part of the various arms do see something of each other every year, the difficulties of obtaining suitable ground in our densely populated island are great. Thus within our army we have greater difficulties to overcome than continental countries, while when we look beyond our army we find that the nature of our national power for the purposes of war is more varied and more complex, and more effective when wisely used than that possessed by any other nation. We can best overcome the difficulties which are inherent in the nature of the British Empire, and contribute best to the effective use of its vast resources, if we keep constantly in mind the special and peculiar character of those resources, are always thinking of ways and means of getting to know them better, and taking every opportunity of practising co-operation.

To sum up: full co-operation between the parts of our power for the purposes of war requires:

(1) Imperial and national co-operation, for which effective organisation of Government for the conduct of war is necessary.

(2) Co-operation between the Services, Navy, Army and Air Force, which requires that each should have practical knowledge of the requirements and methods of action of the others.

(3) Co-operation within the Army, of which the Regular Army is only the advanced guard, the main body being the Territorial Army and the forces of the Dominions.

(4) Co-operation between the various arms and departments of the Army, the foundation of which is combined training.

CHAPTER VIII

THE PRINCIPLE OF THE OFFENSIVE

Offensive necessary since victory cannot be obtained by passive defence—Our difficulties in obtaining the initiative—Examples of this from our military history—Use of sea power to overcome these difficulties—British public opinion and military attack—How Marlborough restored the offensive to war—The lines of Brabant—The "non plus ultra lines"—The effect of the Great War upon the attitude of the public towards attack—The influence of the results of the battle of the Somme—Ultimate object of manœuvre in war is attack on favourable terms—Allocation of one part of an army for defence and another for attack—Considerations affecting counter-attack from a position—The strategical offensive and tactical defensive—The example of Plevna—The Germans in 1914—The future of manœuvre in war—Conclusions.

The Field Service Regulations say: "The ultimate overthrow of the enemy demands offensive action. A successful defensive unless followed by offensive action can result only in averting defeat. The offensive tends to confer the initiative, and, with it, liberty of action, to force a defensive conduct upon the enemy, to raise the morale of the forces and to depress that of the enemy." [1]

Since there is no instance in the whole long history of war of victory being obtained by passive defence, since the advantages of obtaining the initiative and liberty of action are obvious, and since every soldier

[1] F. S. Regs., II. 8. v.

who has had experience of it knows the strain upon morale of awaiting attack, the truth of this needs no demonstration. The question is, How are these advantages which offensive action confers to be obtained? It is clear that the sooner a commander obtains initiative and liberty of action in war the easier will be his task. But here we British at once find ourselves in difficulties. If initiative is to be obtained from the first, we must be ready to move and strike first. This means that our preparations must be completed before those of the enemy, in other words, that our mobilisation must be more rapid.

I have already explained that in the past, in dealing with uncivilised or semi-civilised enemies, we have usually had on the spot small detachments of the nature of Imperial outposts, and it has taken us a long time to organise the transport and communications of forces required to enter countries devoid of supplies. During the period of preparation the enemy has had the initiative and has usually been able to dictate to us the general direction of our operations. For example, when the Khalifa rose in 1895 in the Soudan and besieged Khartoum, it was the relief of Gordon in that town which was the prime object of our Nile campaign. We may hope that the Air Force will in this kind of warfare give us a degree of initiative in the future which we have never had in the past.

In more serious warfare the result has been similar though the reasons for the result have been different. The circumstances of the British Empire make it necessary for us to keep about one-half of our army abroad. The bulk of our regular infantry is organised in regiments of two battalions, of which one is usually at home, the other overseas. The regiment

is then with us an administrative, not a fighting organisation. Its administrative centre is its depot, and to the depot come the reserves required on mobilisation, and there they are equipped and thence they are sent to join their battalion. But in continental armies with compulsory service the regiment is both an administrative and a fighting organisation. It is usually quartered permanently in one station or district, and in that district live the reservists it requires to raise its strength to war establishment. It follows then that our system of mobilisation must be slower than that of continental nations, and we can never hope to obtain the initiative by a more rapid mobilisation than theirs.

When we come to consider also that our army when it is mobilised has to be embarked, that the collection and preparation of the necessary transports is a lengthy process, and that when embarked it has to be transported and disembarked in the theatre of war, it is not surprising to find that in no case during the last hundred years have we been able to secure the initiative and complete freedom of action at the first. It is often true, as Lord Kitchener said in the early months of 1915, "We have to make war as we must and not as we would like to." [1] Looking back at the more important campaigns in which we have been engaged during the past hundred years, we find that our intervention which brought about the Crimean War was caused by a Russian attack upon Turkey. Russia's object was either to secure, or to be the predominating influence in, Constantinople, and it appeared to us that Russian control of the Dardanelles would be a permanent menace to our com-

[1] *Soldiers and Statesmen*, Robertson, Vol. I. p. 92.

munications with the Far East. Russia declared war on Turkey on October 23, 1853, she invaded what is now Roumania and was then a Principality under Turkish suzerainty, reached and crossed the Danube and laid siege to the Turkish fortresses of Silistria and Giurgevo on that river. England declared war on Russia on February 23, 1854. A fleet was sent to Constantinople, we secured command of the Black Sea and, after first occupying the Dardanelles, we landed our Expeditionary Force at Varna on the coast of what is now Bulgaria. Up to that time the Russians had the initiative, we, in our endeavour to help the Turks, had conformed to Russian action. Then Austria intervened, and under a threat from her Russia withdrew from the Principalities. We then decided in conjunction with the French to make a combined naval and military attack upon Sebastopol, with the object of destroying it as a naval base in the Black Sea. We completed our landing on the coast of the Crimea on September 18, 1854, defeated the Russian garrison of the Crimea in the battle of the Alma and laid siege to Sebastopol, thus forcing the Russians to come and fight us in the Crimea for the relief of their fortress. We had gained the initiative some eight months after our entry into the war.

In May 1882 a revolt of the Egyptian army under the leadership of Arabi Pasha placed the latter in control of Egypt. Our Mediterranean fleet was sent to Alexandria to protect British interests, but by the time of its arrival the revolting Egyptians had secured possession both of Cairo and Alexandria and had begun mounting guns and improving the coast defences at the latter port. This menaced the security of our fleet in the roadstead, and on July 11th the navy

began a bombardment of the defences of Alexandria, which the enemy thereupon abandoned, taking up a strong defensive position outside the town. We landed troops to secure order in Alexandria and to observe the Egyptian position outside the place. In the meantime it had been decided to send a military expedition to Egypt under Sir Garnet Wolseley, who arrived at Alexandria on August 16th. He had decided, in order to secure the initiative and to force the enemy to conform, to move the bulk of his force secretly down the Suez Canal to Ismailia and to advance directly upon Cairo from that place, while demonstrating against the Egyptian position outside Alexandria. This movement began on August 19th, was completed on August 23rd, and the Egyptians were compelled, in order to cover Cairo, to take up a defensive position at Tel-el-Kebir, where they were decisively defeated on September 13th, after a night advance against their works.

On October 9, 1899, President Kruger issued an ultimatum to Great Britain in order to forestall our despatch of reinforcements to South Africa, where our relations with the Boer Republics had long been strained. Two days later a state of war existed, and on October 12th the Boers began the invasion of Natal. They drove back or defeated our outlying detachments in that Colony and shut up the greater part of our forces in Ladysmith. Our main Expeditionary Force under the command of Sir Redvers Buller did not reach South Africa until November, by which time the situation in Natal, and in particular the situation in Ladysmith, was so serious that we had to abandon our original plan of campaign, which was to advance from the Cape Colony through the Orange

Free State, and to transfer our troops to Natal, where they became engaged in a long and costly struggle to relieve Ladysmith. It was not until February 1900, when considerable reinforcements arrived under the command of Lord Roberts, that we were able to secure the initiative and carry out our original plan.

In 1914 the Germans began the invasion of Belgium on August 4th, with partially mobilised troops, and on August 6th they were in possession of the town of Liége. On August 17th the mobilisation of the German armies on the Western Front was completed and they were all ready to advance. Our concentration behind the French fortress of Maubeuge was only sufficiently completed by the evening of August 20th to enable us to advance the next day, by which time the Germans had occupied the Belgian capital. The mobilisation and preparation of our Expeditionary Force had been so carefully worked out and worked so smoothly and rapidly that it is hardly possible that it could have been improved upon. Yet we were compelled from the very first to resign the initiative to the Germans. It has often been suggested that the British Government should have ordered mobilisation simultaneously with the French Government on August 1st, instead of at 4 p.m. on August 4th, as it actually did, but this advance in the date of our mobilisation could not have given us the initiative, while British soldiers have always to reckon with the fact that their Governments have almost invariably deferred mobilisation and declaration of war until it is quite obvious that in no circumstances can war be avoided.

These examples of very varied kinds of war in which we have been engaged show that we cannot hope to

gain the initiative by more rapid preparation, as the great continental armies all strove to do in August 1914. Only in India do we maintain forces in a sufficient state of readiness to be put into the field without the slow processes of mobilisation and embarkation which are inevitable for our forces at home. But these examples also show that we do possess a means, when we can use it, of overcoming this initial handicap, and of wresting the initiative from the enemy. Both in the Crimea in 1864 and in Egypt in 1882 we won the initiative by landing our Expeditionary Force where the enemy did not expect it, and so forced him to conform to our operations. That power is our antidote to a slowness in preparation inherent in our military system, which in turn is due to the circumstances of the British Empire.

There is another characteristic peculiar to us of which British soldiers will be wise to take account. If we talk about war to our civilian friends, most of them will agree that attack is the best form of defence, yet in the mass they, the British public, have a predilection for military defence, for naval attack. Nelson is the national naval hero, and the favourite story of him is of his turning his blind eye on the order of recall at Copenhagen and sailing in to attack. Wellington is the national military hero, and the public likes to remember his stubborn stand at Waterloo, forgetting that it was Blücher's offensive on Napoleon's flank which decided the issue of the battle, though it was prepared by British resistance of the French attack. Marlborough was unquestionably the greatest military genius we have produced, and his genius was especially shown in creating opportunities for offensive action and using them when created.

But the memory of Marlborough is dim in the public mind in comparison with the memory of Wellington. Marlborough pre-eminently amongst British commanders showed by his practice that he realised the truth, which Foch put into words two hundred years later: "If you want to push the enemy back, beat him, otherwise nothing is done; and there is only one means of doing this, namely, fighting." [1] But he took care to use economy of force, surprise, mobility, stratagem, in a word, generalship, so that, while he sought battle, he fought when he had created odds in his favour.

Marlborough's special claim to greatness lies in the fact that he restored to war the principle of the offensive. At the end of the seventeenth and the beginning of the eighteenth centuries war was as much dominated by fortifications as from 1915 to 1918 it was dominated by entrenchments on the Western Front. Louis XIV's great engineer, Vauban, had covered Eastern and North-Eastern France with a network of fortresses, many of which still stand as monuments to his ingenuity and engineering skill. The armies of those days were in the main raised and paid by the monarch and by some of his chief nobles, and as the financial systems of the time did not lend themselves readily to raising money, armies were regarded as too precious to be wasted in battle. Wars tended to drag slowly on in a series of sieges. The idea of battle as the means of gaining the object of war had almost disappeared. Such was the general attitude towards war when Marlborough made his reputation by his brilliant march to Blenheim, and his great victory on that field in August 1704. The following year found

[1] Foch, *Principles of War*, p. 34.

him united with the Dutch in the Low Countries, which were to be henceforth his theatre of war. His enemies, the French, were not content, in their passive defence, to rely upon their chain of fortresses, and his immediate opponent, Villeroi, had constructed an elaborate series of entrenchments, called the lines of Brabant, which extended from Namur to Antwerp, and behind those lines he commanded an army approximately equal in numbers to Marlborough's.

Marlborough's Dutch colleagues, full of the ideas which then prevailed of the importance of keeping an army in being, were horrified by the suggestion that such defences should be attacked, and he, without disclosing to them his plans, won their reluctant consent to his enterprise, on the condition that they would only follow and support him if he succeeded, and cover his retreat if he failed. If Villeroi's lines were comparable to the entrenchments of the Great War, save that they were not covered by a network of barbed wire, there was one vital difference between Marlborough's problem and ours on the Western Front in 1915–18. The size of the armies in those days did not admit of the manning of long lines, such as Villeroi had constructed. They were held by outposts, with the main army quartered behind, and the prime business of the latter was to watch the enemy, be ready to move parallel with him, behind the cover of the defences, and to man these wherever he attempted attack. Thus Marlborough had opportunities for manœuvre such as did not exist on the Western Front.

These he used by feinting attack, where he knew attack was expected, and then, countermarching rapidly by night, he surprised a French outpost near

Tirlemont and was through Villeroi's elaborate defences with trifling loss before the latter was aware of what had happened. Marlborough failed in his prime object, which was not to manœuvre Villeroi out of his lines but to bring him to battle on favourable terms, but he was none the less proud, and justly proud, of his achievement, which he was disposed to rank with Blenheim. Years later he ordered a splendid series of tapestries to be woven for his palace of Blenheim, where they still are, and he took care to supply the artist who designed them with accurate plans of his battles. In this series the passage of the lines of Brabant finds a place beside the tapestry picture of the battle of Blenheim, but so little was the meaning of Marlborough's achievement understood that until quite recently this particular tapestry was erroneously called the Siege of Lille. The forcing of the lines of Brabant marked an epoch in the history of war. A British commander had overcome fortification by surprise and mobility, and restored manœuvre with the object of battle to its proper place in war.

Six years later, in 1711, another French general, Villars, a more formidable opponent than Villeroi, also placed his reliance upon entrenchments to protect France. To stem the advance of the Allies under Marlborough he had constructed, across territory very familiar to the British army, lines which in extent and elaboration far excelled those of Brabant. They stretched from the Canche, near Etaples, the "Eat-apples" of the Great War, in front of Montreuil, along the ramparts of which our G.H.Q. used, while Lord Haig was Commander-in-Chief, to take the air, by Hesdin and Frévent to Arras and the river Scarpe. From the Scarpe the entrenchments ran by Arleux

and Bouchain along the Scheldt to Valenciennes, and thence in front of Maubeuge, by the Sambre, to Charleroi and Namur. When Marlborough arrived before these lines, apparently baffled, Villars wrote confidently to his king that he had brought the Duke to his "non plus ultra," and as the "non plus ultra lines" these works of Villars are known to history.

It is unnecessary for my purpose to describe in detail the manœuvres by which Marlborough penetrated the "non plus ultra"; they would not be applicable to-day.[1] In essence they were similar to those which he employed against Villeroi. By mystifying and misleading his enemy, by mobility and by surprise the "non plus ultra lines" were penetrated, again with small loss. Generalship in offence had beaten entrenchment.

I have dwelt on these examples of how a great British soldier restored mobility in war, because at the present time the memories of the terrible cost of assaulting entrenchments in the Great War have tended to strengthen the predilection of British public opinion for defence to which I have referred. The one battle-field of the Great War which is pre-eminently the goal of pilgrimage, the one on which public memory particularly lingers with sad pride, is Ypres. Ypres has become the symbol of stubborn, British, bull-dog defence. Amongst one hundred men and women who know of Ypres and what it means it is hard to find one who can tell of what happened on August 8, 1918, when our Fourth Army under Rawlinson began the battle of Amiens, one of the great feats

[1] For excellent short accounts of the forcing of the lines of Brabant and of the "non plus ultra," see *Marlborough and the British Army*, Atkinson.

of arms in the history of the British Army. When that battle, which taught the Germans that victory for them was hopeless, and was the first act in our triumphant advance to Mons, is remembered by the man in the street, it is recalled as a victory for the tanks. Tanks played in it a notable rôle, but they were one amongst several contributing causes of victory. Secrecy, misleading the enemy, surprise, and improved methods of artillery fire had as great part in the battle as had tanks. The unexpected appearance of the Canadian corps on the battle-field, the fact that we had learned to bring our guns to bear on their targets without giving their numbers and positions away by preliminary ranging, combined with the efficiency of a new type of tank, with which infantry had been carefully taught to work, all these in combination, rather than any one of them in particular, made August 8, 1918, a proud day for the British Army.

The memories of the last war are always vivid, and their influence is therefore enduring, while we forget that the next war is never like the last in its details and methods. The faith in fortification and positions and the belief that offensive battle was rather an evil than not, lingered on long after the study of Marlborough's methods should have given it the quietus. Foch's scathing comments on the military thought of this period are worth quoting: "Joly de Maizeroy gave the following definition of war. 'The science of war consists not only in knowing how to fight, but even more in avoiding the fight, in selecting positions, in directing the marches so as to reach the goal without committing oneself . . . so again as to decide to fight a battle only when it is deemed indispensable.'

To defer, to put off, such is the formula. We again come across this war without battle in the pages of Massenbach, who considered it the supreme form of military art, and said in particular, referring to Prince Henry, brother of Frederick, and thinking he was speaking highly of that Prince: 'He knew how to conquer fortune by bold marching; more successful than Cæsar at Dyrrachium, greater than Condé at Rocroy, he like the immortal Berwick achieved victory without fighting.'

"Therefore a man of his time! To him manœuvres, positions, are the whole of warfare. No wonder we see him act in 1806 [1] as a great inspirer of disastrous schemes, more particularly when he thought that the salvation of the Prussian Army lay in the position of Ethesburg near Weimar. Thither did he urge the remnant of that army, flying from Napoleon, to repair, as if that hill could have possessed in itself, without a strong army to hold it, the power of stopping the victorious flood of the French. Again, the same kind of warfare was characterised by Marshal de Saxe [2] himself, albeit a man of undeniable ability: 'I am not in favour of giving battle, especially at the outset of a war. I am even convinced that a clever general can wage war his whole life without being compelled to do so.'" [3]

We may be disposed to smile when we read of the direction of marches so as to reach the goal without committing oneself as a mark of generalship, but in the South African War, when our columns were

[1] During Napoleon's campaign of that year against Prussia.

[2] Marshal de Saxe is of interest to us as being the French general who was sent to Dunkirk in 1744 to command the French troops designated to help the Pretender in the '45.

[3] *Principles of War*, Foch, p. 27.

ordered to march from, shall we say, Stinkfontein to Burghersdorp, and Boers were met on the way, the really important object too often appeared to be to reach Burghersdorp rather than to fight the Boers. We are no less prone than others to forget the object and to be impressed by methods which appear to be formidable because they come in a new form. In the final chapter of his five volumes on the Great War, Mr. Churchill concludes an otherwise fair criticism of the French military policy of 1914 with the words: "No general in history ever had the chance of Joffre. He had only to say, 'Let the attackers attack; let them learn that bullets kill men and that earth stops bullets.'" [1] A policy of passive defence was psychologically impossible for the French in 1914. It would have been in their eyes a repetition of the blunders of 1870, it would have been a confession of inferiority which a proud nation and a proud army could not have made voluntarily, and as a policy it would have been militarily useless. The French in 1914 had not the numbers to man the length of their frontier defensively, and, had they attempted to do so, they would have been manœuvred out of their lines into the open to fight where their enemy compelled them to fight, more easily than Marlborough outmanœuvred Villars and Villeroi. That such a comment should be seriously made is a sign of an unreasoning exaltation of defence traceable to the bitter memories of attacks upon entrenchments in the Great War, and to the conviction that because trench warfare dominated that war it will dominate war in the future.

Public opinion is apt to react upon military opinion,

[1] *The World Crisis: the Aftermath*, Churchill, p. 444.

and it certainly reacts upon Governmental opinion. In 1916 the long-drawn-out struggle of the battle of the Somme produced no evident and striking results, but the long casualty lists, which appeared daily, were in the papers for everyone to read. The exhaustion of the Germans, of which we now know the details from German sources, was reported from G.H.Q., but no conclusive evidence could be produced, and it was put down to unjustifiable optimism. Impatience of attacks which brought no conclusive victory led in Great Britain and in France to a drastic change of plan, which required months of preparation. The Germans were given time to recover from their exhaustion, to complete their Hindenburg line, and to withdraw within its shelter, and when the new forms of attack, which appeared to offer speedy victory, were tried by General Nivelle, they failed so disastrously as to imperil the cause of the Allies.

The first step towards an informed public opinion in these matters is an informed military opinion, and that must be based upon faith in the principles of war. Since victory cannot be won without offensive action, nor the object of war attained without battle, offensive action in battle must ever be the prime aim in war. This does not mean that battles are to be fought on all and every possible occasion, still less that the art of war consists in seeking out the enemy and attacking him. Marlborough, whom I have put forward as our leading exponent of the principle of the offensive, after he had broken through the "non plus ultra lines," with the object of bringing Villars to battle, found the French strongly posted near Cambrai, almost on the field of Bourlon Wood, where we fought the Germans in November and December 1917.

Deciding that the occasion was unfavourable for attack, he reluctantly turned aside to lay siege to Bouchain, and wrote, in reply to the criticism that he had missed a chance of battle: "I own, had it been practicable, there is no comparison between the advantages of a battle and what we can reap by a siege, but there is not one general or other officer that has the least judgment in these matters but must allow it was altogether impossible to attack the enemy with any probable hope of success."

Attack is not to be sought for its own sake, but the object of all manœuvre in war should be the creation of favourable opportunity for attack. In that, as we have seen, the judicious use of defence has its part to play. But conditions have changed materially since the days when the deliberate choice of a defensive position, with a view to issuing from it later in counter-attack, led to decisive results such as Napoleon obtained at Austerlitz, Wellington at Salamanca. Both those great commanders were able to survey the whole of their battle-fields, to choose themselves the moment for passing from defence to attack, and they themselves launched the attack under their own eyes at the proper moment. Such conditions do not obtain to-day. By the time when the modern commander has received his reports from the front and issued his orders for attack the opportunity for action may well have passed. The situation at the moment when attack begins will certainly be different from that which prevailed when he issued his orders. Counter-attack from a chosen position is a far more hazardous enterprise than it was a hundred years ago. As Section 25 of Field Service Regulations says: "To choose the right time and place for changing from

a defensive to an offensive attitude demands high qualities of skill and resolution from a commander, intelligent anticipation of orders on the part of subordinates, and reliable communications throughout all portions of the force. Unless the foregoing conditions obtain, or unless it is necessary to delay decision owing to a temporary inferiority, a defensive attitude at the outset of a battle is rarely desirable." I am here speaking of a general counter-attack, not of local counter-attacks, which are still an invaluable and indeed indispensable means of defence.

I would make a clear distinction between counter-attack from a defensive position and the allotment of one part of an army to defence and another to attack, as, for example, Lee distributed his forces at Chancellorsville. I have already suggested that the development of mechanisation opens up vistas of opportunity for action of that description. It may be that we shall go to war with a part of our army completely mechanised and highly mobile, a part only partly mechanised and therefore less mobile. A combination of defensive action by the less mobile portion to hold an enemy while the mobile portion sweeps round to attack the enemy's flank and rear, is an operation which can be planned from the outset and is not as dependent, as is the launching of a general counter-attack from a position, upon detailed and timely knowledge of the course of events, and upon the means to make prompt use of that knowledge being under the hand of the commander.

Such a form of the combination of attack and defence is similar in its effect to combination of two forces operating from divergent bases upon a battle-field, as happened in the campaign of Waterloo. On

June 18, 1815, Wellington standing on the defensive resisted all Napoleon's attacks until the arrival of the Prussians under Blücher upon the battle-field decided the issue and enabled him to take part in a general offensive which completed the defeat of the French. It requires little imagination to see that such a combination could have been brought about with greater ease and certainty had the Prussians in 1815 been a mechanised force, just as the combination of plans between the two commanders would have been incomparably easier had they possessed wireless and aircraft.

There is yet another form of the use of defence as the prelude to offence of which Section 25 of the Field Service Regulations speaks: "A commander may sometimes decide to adopt a defensive attitude at the outset of a battle if he considers that he will gain a decisive success with more certainty and less loss by inducing his opponent to make the first attack.

"A similar course may be followed if he has been able to occupy a position which the enemy is compelled to attack to regain his liberty of action.

"In such circumstances definite advantages may be gained by the tactical strength of the defensive due to the great accuracy, range and volume of fire developed by modern weapons. In coming to a decision the necessity for the ultimate assumption of the offensive must always be borne in mind."

The combination of a strategical offensive, which succeeds in threatening something vital to the enemy, with a tactical defensive is one which has appealed to many writers on the art of war, but they are agreed that it is rare, because, if a decisive result is to be obtained, the tactical defensive must be converted into an offensive, and this, as we have seen, is difficult

to bring about, except in the form of what I may call the Chancellorsville manœuvre. Von der Goltz says of this method: "The strategical attack may lead an army to a point the occupation of which deprives the enemy of his means of subsistence, so that the latter must attack, and a temporary exchange takes place in which strategical offensive is attended by a tactical defensive and the reverse. But such cases are rare." [1]

In the Russo-Turkish war of 1877 a large Russian army marched through Roumania, crossed the Danube, and became engaged with the Turks in the passes of the Balkans. While the Russians were engaged in and just beyond the mountains, a Turkish Army under Osman Pasha advanced from Widin and reached Plevna, where it was within striking distance of the bridges over the Danube upon which the Russian communications depended. Osman Pasha's movement was then strategically offensive and the Russians were obliged to take steps to cover their communications. Osman Pasha, not feeling himself sufficiently strong to carry his offensive farther, dug himself in at Plevna, and the Russians made a series of ill-planned and badly directed attacks upon his defences. The failure of these attacks so exhausted the Russians that, if Osman Pasha had acted vigorously on the offensive, in conjunction with the other Turkish commanders, there was a great probability that he would have been able to cut the Russian communications, bring about the defeat of their forces which had crossed the Danube, and win a favourable peace for his country.

But after one hesitating attempt at an advance, Osman Pasha remained within his defences at Plevna, where the Russians eventually succeeded in isolating

[1] *The Conduct of War*, Von der Goltz, IV.

him and forcing him to surrender. Neither he nor Turkish head-quarters had realised the extent of the Russian weakness after the failure of their attacks, and combination with the other Turkish forces in the field was difficult to arrange. These are the kind of problems which are inherent in a defensive attitude, and it is always hard to solve them. Yet without ultimate offence, defence is certain to lead to failure.

In the Crimean War our landing was a strategically offensive operation; having begun the siege of Sebastopol we compelled the Russians to come and attack us in order to relieve the place. While holding off the Russian forces outside the fortress we at the same time prosecuted the siege, and it was the fall of Sebastopol which won for us the object of the war and brought about peace. Thus in this campaign we were acting strategically on the offensive and tactically both offensively and defensively. It was the special nature of our power which enabled us to do this, but I know of no other example of the same kind in modern war.

In the Great War the Germans began their campaign on the Western Front by acting both strategically and tactically on the offensive. At the end of 1914 their campaign for the conquest of France had failed, but they had secured a commanding position in Belgium and North-Eastern France, and their centre was established within 100 kilometres of Paris. Having completed the trench barrier from the North Sea to Switzerland, they adopted a strategical and tactical defensive on the west, varied by a few local offensives such as the gas attack at Ypres in April 1915. On the Eastern Front their policy became

offensive, and they reduced their forces in the West to the minimum required to hold their lines. This policy practically forced an offensive policy on the French; firstly, because they required to push the German lines further back in order to obtain greater security, for a comparatively short German advance in the neighbourhood of Amiens would have cut direct communication between the British and French armies, and endangered Paris; secondly, because they could not remain passively on the defensive while their Allies the Russians were being driven back; and thirdly, because of the moral urge to free their countrymen, who were in the enemy's hands, and retrieve their territory.

Criticism of the Allied attacks in 1915 must be tempered by these considerations. There are in war many influences which affect the action of a commander other than the military situation on his own front, and therefore it is often extremely difficult at the time to pursue what is, after the event, seen to be the wisest course.

The strength of the German position in 1915 lay in the fact that it was always within their power to resume the offensive in the West when they had driven the Russians back far enough to secure Eastern Prussia, and to re-establish the confidence of the Austrians. This they eventually did in the spring of 1918, and it was the failure of that offensive which decided the issue of the war in the West. It will for long be a matter of debate whether the Germans would not have been better advised to curtail their offensive in the East and resume attack in the West before the expansion of the British Army had become serious, and before the Allies had developed their supplies of

munitions. The Germans, like ourselves, had an Eastern and Western problem.

Whatever form then of strategy is adopted in war, and this form may, as we have seen, be changed to suit changing conditions, an ultimate offensive is necessary if victory is to be won. Therefore the prime purpose in war must always be to seek and to create favourable opportunities for offensive action. This is done by manœuvre. But, it may be said, surely the whole story of the Great War shows that entrenchments have so limited the old forms of manœuvre as to make them impossible of application to-day? This is merely another form of that popular exaltation of defence to which I have referred. The Great War began with a period of manœuvre, and it was not entrenchments alone which limited manœuvre, but entrenchments combined with numbers. Had not the trenches been fully manned from end to end, they could have been penetrated by the same kind of manœuvre as was employed by Marlborough at the beginning of the eighteenth century. Now the universal demand for economy and political pressure for the reduction of armaments has limited the size of armies, and the military establishments maintained in time of peace by most Powers are much smaller than they were in 1914; while the peace establishment of an army cannot be expanded immediately on the declaration of war beyond certain definite limits. Further, as we have seen, the demands which modern war makes upon manufacture limits drastically the number of men available for the expansion of armies. It is not probable, therefore, that the conditions of 1915 will be repeated in the near future. Beyond that in these days of change I am not prepared to go.

But as far as we can see ahead there is a reasonable certainty that there will be as much scope for manœuvre as there was before the creation of the trench barrier.

Success in manœuvre depends now as much as it did in Marlborough's day upon mystifying and misleading the enemy, upon surprise, and above all upon mobility.

We have seen that in the search for the initiative and in the endeavour to take the offensive in war we start with a certain handicap, but that we possess in the nature of our power great countervailing advantages. The rapid and constant improvement in means of communications of all kinds is steadily reducing our handicap, and knitting closer together the scattered powers of the Empire. As a great manufacturing nation we have been able to lead the world in the application of new forms of mobility to the purposes of war. It may well be then that, if we have again to go to war, it is reserved for a British commander of the future to emulate Marlborough, kill the bogy of entrenchments and restore manœuvre with the object of offensive action in battle to the place it held in the estimation of all the great commanders of the past.

We may conclude then—

(1) That since victory in war can only be secured by offensive action, such action must be the ultimate aim of all manœuvre.

(2) There are obvious advantages in anticipating the enemy by offensive action.

(3) Our special conditions make it difficult for us to do this.

(4) The difficulties may be overcome by the skilful use of combined naval and military power.

(5) The national prejudice against military offensive action must be overcome.

(6) Present developments tend to be favourable to the allocation of one part of an army to defence, another to offence.

(7) On the other hand, a general counter-attack from a defensive position tends to become more difficult.

(8) Mobility is the best antidote to trenches.

CHAPTER IX

THE PRINCIPLE OF MOBILITY

The elements of mobility—Effect of transport and supply on mobility—Illustrations of this—Effect of staff work on mobility—Effect of this on mobility of Napoleonic armies—Complication of staff work by mechanisation—"Divide to march, concentrate to fight"—Use of cavalry as a mobile striking force in the past—Cromwell's Ironsides—Napoleon's cavalry—Cavalry in American Civil War—Decline of cavalry as a striking force—Its place taken by the modern mechanical force—The use of tanks—Conclusions.

MOBILITY is one of the chief means of manœuvre, which is in turn the means of engaging in battle to advantage. How then is mobility obtained? It is of such vital importance in war that much of the training and a great deal of the organisation of armies is designed with a view to speed in movement. Until the latter part of the Russo-Japanese War it was a commonplace that war was more concerned with marches than with battles. Battles were occasional incidents, marches of almost daily occurrence. Therefore one of the objects of teaching discipline, of drill, and particularly of physical training and horse-mastership, has always been to secure effective marching power, and those armies which have been most successful in this respect have been those which have paid most attention to march discipline.

All this is but the beginning of the search for mobility. Power of movement on the part of the troops may be

completely neutralised by bad organisation, indifferent staff work, or lack of forethought in generalship. It is of no avail for troops to be able to accomplish long marches if their supplies of ammunition and food cannot keep pace with them. I have already mentioned that we fortunately discovered in time before the Great War that the ever-increasing demands for ammunition, due to the development of quick-firing weapons, had so increased the amount of horse transport required by our army as to block all roads behind it with a mass of slow-moving vehicles, which greatly hampered its power of movement. One of the problems of warfare in roadless barren mountain country, such as was the North-West Frontier of India in the nineteenth century, has always been that pack animals, the only suitable transport for such country, if required to do more than a limited number of marches from a base, would have to carry so much forage for themselves that they would be useless as a means of transport. They would have no carrying capacity for food, ammunition and the other needs of the troops. Therefore in such cases it was always necessary to organise along a line of communications, depots of supplies at suitable intervals, and until this was done, and it was a slow process, troops could not move.

In desert countries the mobility of an army is normally governed by the supply of water which is available. In March 1917 our first attack on the Turkish positions on the southern frontier of Palestine, in the first battle of Gaza, failed mainly because the time within which manœuvres were possible was limited by the amount of water which could be transported for the troops. We had to advance from the arid desert of Sinai against the Turkish positions, and

it was decided, before the battle began, that success must be won within twenty-four hours, which meant that we must by that time be in possession of the wells of Gaza. In fact, when the time limit expired the Turks were on the point of retreating, but this was not known to our commanders, and our troops were withdrawn. In the following October Allenby obtained the mobility which enabled him to outmanœuvre the Turks in the battle of Gaza–Beersheba largely because of the very elaborate preparations which he had made for the supply and transport of water.

The manœuvring power of an army is thus greatly affected by the extent to which it has been provided with transport of the right kind for supplies of the right kind, and by the way in which that transport is organised. In the South African War of 1899–1902 many of our initial difficulties were owing to the fact that we had lost sight of this fundamental basis of mobility. We entered the war with the conviction that if we brought the Boers to battle in any way we could defeat them, and that manœuvre would be but a secondary consideration. For lack of suitable transport our operations were at first confined to the railways, which were few. Our lines of advance were thus clearly marked out, and in the early operations in the Cape Colony the more mobile Boers were able to take up entrenched positions out of which we, for lack of transport, could not manœuvre them. We therefore had to have resort to frontal attacks, and, when these had succeeded, the Boers escaped with comparatively small loss to take up a fresh entrenched position. When Lord Roberts arrived in South Africa, his first care was to reorganise and increase the transport, and also to increase the number of mounted troops. By these means he was

enabled in February 1900 to leave the railway, manœuvre Cronje out of his entrenched position at Magersfontein, bring him to action at Paardeberg, surround him and force him to surrender. But during the march to Paardeberg Lord Roberts' reserve supplies followed him in a great convoy of ox waggons, which was raided and destroyed by De Wet. The result of this was that when we reached Bloemfontein we were very short of supplies, while the Boers in falling back from the frontier of the Cape Colony had destroyed the railway bridges. So despite the reorganisation of the transport and the increase in mounted troops, our army in Bloemfontein was for a long time immobile, and there is very little doubt but that our long halt there had much to do with the prolongation of the war. Had we been able to follow up at once the effect produced by the surrender of Cronje, the relief of Ladysmith, and the occupation of the capital of the Orange Free State, it is highly probable that we should have appreciably shortened a long and costly struggle.

Many of these hindrances to mobility have been reduced by the development of motor transport, which, as I have explained, was the beginning of what we now call mechanisation, and upon the North-West Frontier of India the construction of roads allows of the employment of such transport, and has greatly increased our power of movement. But even motor lorries have not unlimited mobility, their radius of effective working is confined to a certain distance from railhead, and is restricted by the state of the roads. During our final advance on the Western Front in 1918 the Germans buried mines with delay action fuses under the railways and the roads. These exploded behind our troops, and the railheads, the points at

which the railways could deliver supplies, fell further and further behind the fighting front, which continued to move forward, and therefore the lorries were required to travel greater and greater distances over badly damaged roads. On November 11th, the date of the Armistice, our armies had reached a line on which they would have been obliged to halt, had fighting continued, to allow the roads and railways to be repaired in order that supplies might be brought up. They had become temporarily immobile, though the actual marching power of the troops was as great as ever. The mobility of armies is, then, more dependent on the efficient organisation of their services of supply and the security of their lines of communication than upon the marching power of troops.

A great deal of nonsense has been written in some accounts of campaigns of the superior marching power of some troops. In particular, extraordinary capacity for marching has been ascribed to the French soldiers of the armies of the Revolution and of Napoleon. In fact there is not and never has been much difference in the leg power of the trained British, French or German soldier. We have to search a little deeper than that to find the secrets of mobility. The superior manœuvring power of the French soldiers of the late eighteenth and early nineteenth centuries was not due to harder leg muscles, but to clearer thinking on the part of their leaders, and to pedantry on the part of their opponents. The armies of the European countries of the middle and late eighteenth century had come to regard themselves as an organisation apart from the nation to which they belonged, and their soldiers were taught to regard themselves as belonging to a profession which uniform separated from those who did not wear

it. War was the business of soldiers alone, and not a national effort. In this faith a theory of war was elaborated in which a scientific system for the organisation of marches, called logistics, played a great part. Foraging, living on the supplies which the country afforded, was regarded as detrimental to discipline, and was not permitted. Therefore the movements of armies depended upon the accumulation of supplies at depots, and chains of depots were organised, much as we used to organise them on the North-West Frontier of India. Elaborate calculations were made as to the distance a given number of men could march before another depot had to be established. At the end of each march the columns were closed up so that they could be halted together in quarters or in camps, their discipline controlled and their feeding made easier. War became a matter of rule and regulation, and these rules and regulations governed and gravely hampered the mobility of armies.

The French Revolution broke up this elaborate and false conception of war. The Republic had not the resources to enable it to copy the elaborate system of its enemies, even if it had wished to do so. It had to improvise, to forage, to live on the country, and somewhat to its own surprise, but much more to that of its opponents, it found that its armies were more than a match for those of its enemies. Common-sense had beaten pedantry, as it always will.

Then came Napoleon, and his genius systematised, put finish to, improvisation. He combined the use of depots with foraging and drawing upon the resources of the country through which he moved, and in particular increased the mobility of his infantry by a new method of organising marches.

I have mentioned that it was the general practice in the eighteenth century to close columns up at the end of a march into camp or quarters. It occurred to Napoleon that this telescoping up and opening out of columns was a waste of power. If the men at the rear of the column were not to do marches beyond their capacity, then the men at the head would have to do less. In a column ten miles long, when the head had covered ten miles the tail would have to march twenty miles in order to close up. Napoleon therefore devised a simple expedient, now universally adopted, of halting and billeting in a depth approximately equal to the length of the column on the march. By this means he increased the mobility of his infantry to an extent which astounded his opponents, who complained that he broke all the rules of war. It was on this system that he made his famous march in 1805 from the Channel coast, where he had been waiting and hoping in vain for an opportunity to invade England, to Ulm, and the mobility which it gave him was one of the main causes of the completeness of his victory. In a column halted in depth, the full marching power of every man could be used, and Napoleon saw to it that it was used. His men, weary with marching and seeing under their eyes the effects of their mobility, said proudly, "Our Emperor wins his battles with our legs," and Napoleon, who did not wish others to know and copy his methods, was careful to preserve the fiction that the Frenchman could walk farther and faster than any of his enemies. It was not, however, better legs, but better brains, a clearer sense of the realities of war, and better staff work, which won the campaign of Ulm.

Organisation and staff work, which means the working out of the details of marches so that all

unnecessary fatigue is avoided, and the fullest possible use made of marching power, are then amongst the prime factors of mobility. Staff work in relation to marches has been much complicated by the development of mechanisation. It is no easy problem to arrange for the movements of bodies of troops with very different rates of marching, so that each shall be available for co-operative action when required, and each shall march without undue strain. Such problems can only be solved correctly by experiment and practice, since without them human imagination is unable to picture all the difficulties and complications which may arise. I well remember that on mobilisation in August 1914 our divisional staffs were supplied with a number of motor-cars, which were naturally an invaluable aid to inter-communication, particularly when corps headquarters was often many miles from divisional headquarters, and telegraphic and telephone communication was not always certain or swift. The division in which I was serving was in close contact with the enemy at the beginning of the retreat from Mons, and the divisional commander naturally wished to be mounted so as to be able to get across country and keep in touch with his troops, and naturally also he wished to have his staff mounted with him. The motor-cars were not wanted at once, and were ordered to move in the column with the troops. The result was that they toiled slowly along in third, their engines were soon boiling, and, being new machines sent straight from the factory on mobilisation, quickly gave out. No one had any experience of using motor-cars with a column of troops on the march in peace time, or had thought about the matter, and when the time came for thinking about it, everyone was occupied with

arranging a difficult retreat from a battle-field, and so a stupid mistake was made. The cars should, of course, have been given a number of halting-places on the march and allowed to get from one to the other at a suitable rate. This is a trifling incident, but it is worth quoting as an example of the kind of mistake which is made in war, when opportunities for practice are not made in time of peace. It was more economical not to issue motor-cars in time of peace, and consequently half a dozen were destroyed in a few days in one division, and the same thing may have happened in others. Practice is just as much needed to make a staff efficient as it is to make troops fit.

Another of the prime factors of mobility is generalship. When we speak of mobility we mean, of course, that our power of movement should be superior to that of the enemy. Mobility is therefore relative, and may be as well obtained by hindering the enemy's power of movement while securing our own, as by developing the marching power of troops. From the examples I have given it will be seen how much any interruption of communications affects mobility. Therefore a better application of the principle of security is an important means of obtaining mobility. The most mobile troops may be brought to a standstill, as Lord Roberts was at Bloemfontein, if their communications are cut or even threatened. All these principles of war are connected, they are a chain, in which some links are occasionally of greater importance than others, some are interchangeable with others, but they are not a series of disconnected recipes for victory.

The choice of object has also a direct effect upon mobility. I have, I think, dwelt sufficiently upon the special mobility which sea power confers upon us, and

on the uses to which it may be put. I will confine myself here to the mobility of an army in the field, and this is clearly much affected by the correct choice of object, the determination with which the object is pursued, and the quickness of decision of the commander. On all these depend the choice of the direction which is given to the army, and the manner in which it is moved. Even if the choice of object has been the best possible at the beginning of the campaign, provision must be made for the unexpected. Thus an army must be moved with its parts properly articulated, so that it is flexible and not rigid, and the larger the army the more difficult this is to arrange. Therefore the suitable distribution of an army in columns of march is one of the chief functions of generalship. If an army moves on so broad a front that its parts cannot be brought together to the battle-field there has been clearly a waste of power, while if the columns of march are so long that it takes the rear portion a day or more to deploy on the front of battle, they are just as much separated as if they were a day's march or more away to a flank. A number of columns moving forward without much depth on parallel roads can be quickly deployed to the front, but cannot change direction quickly, and therefore lose power of manœuvre and the capacity to deal with the unexpected. The prescription for manœuvre has always been "divide to march, concentrate to fight," because division makes change of direction and the service of supply easier, and is less fatiguing to the troops than is concentration. But to hold the balance correctly between division and concentration requires timely information and highly trained judgment. All these considerations which have a direct influence upon mobility are clearly

summed up in Section 22 of the Field Service Regulations: "No precise rules can be laid down for the degree of readiness for action with which a force should move. Readiness for instant action demands that the force should march by all available routes within the limits of the front on which it is intended to fight. But a large force which marches in this manner loses to a great extent its power to manœuvre, for while it can move directly to its front or rear, it cannot easily change direction. The initial direction given to the movement is therefore a matter of great importance. It is often advisable to defer the formation of a fighting front as long as it is possible to do so with safety. Movements are made with more rapidity and with less fatigue to the troops if arms having different normal marching speeds move separately.

If numerous good roads are available, a judicious distribution of a force for marching purposes enables troops to be deployed rapidly into line of battle, and at the same time facilitates maintenance; the existence of lateral roads will minimise the risk of losing the power of manœuvre. In making this distribution the organisation of the force must be considered, so that divisions and brigades are not broken, except when absolutely unavoidable.

When the number of roads available is limited, movement in depth and on a narrow front is often unavoidable. Such an arrangement has the disadvantage that deployment cannot be carried out rapidly and that the difficulties of maintenance are increased if more than one division is required to march on the same road.

When the force is not in contact with the enemy, and there is no probability of such contact, the well-being of the troops is the first consideration.

The force may then move on a considerably wider front than it would occupy in battle, or, if the number of roads is limited, it may move in groups on such as are available. Every possible precaution must be taken to preserve the fighting strength of the force by careful arrangement of the moves, and by seeing that the troops are adequately housed and fed.

It is not necessary, in these circumstances, to concentrate before or after a move; to do so would be a waste of power. By this means each unit is able to carry out a full day's move, the resources of the country in regard to subsistence and billeting are utilised to the utmost, and mechanical transport is not wasted."

All these matters of which I have been speaking, discipline, training, organisation, staff work and generalship, have been elements of mobility from the beginnings of war. But now a new element has appeared, or rather an old one has reappeared in a new form. Most of the great commanders of the past, Cromwell, Marlborough, Peterborough, Frederick the Great, Napoleon, Lee, to make a selection only from the seventeenth century onwards, have relied for their results not only upon a just appreciation of the importance of these elements, but also upon possessing one specially mobile portion of their armies. The horse being in the days of these commanders the natural means of expediting movement, it was horsemen who formed this mobile portion. But mobility for the purpose of manœuvre and battle was not obtained merely by putting soldiers upon horses, though Peterborough did that in Spain as a special expedient, nor by collecting good horsemen on good horses. Rupert's Cavaliers were men who habitually used the horse for travel and sport, and at the beginning of the Civil

War the Cavaliers were more dashing horsemen than the Parliamentary yeomen. But Cromwell's Ironsides eventually excelled them in mobility because he had given thought and care to drill, discipline, organisation and equipment, which Rupert had not. He wanted a force which could deliver a decisive blow by shock action in battle, and he saw that for that he must have a suitable armament, cohesion, and the power to recover rapidly from the disorder of fight. Therefore he discarded the harquebus with which the Parliamentarian horsemen had been armed at Edgehill, and equipped his Ironsides as cuirassiers, whose weapons were swords and pistols. He took immense pains in the selection of his men, his discipline was very strict, and his training severe, and by these means he created a mobile striking force which became his chief instrument. Mobility was his aim from a very early period of the Civil War. When his native Huntingdon wished to raise for him a company of foot at its own expense he wrote: "I approve of the business, only I desire to advise you that your foot company may be turned into a troop of horse, which indeed will (by God's blessing) far more advantage the cause than two or three companies of foot, especially if your men be honest, godly men." [1] Rupert's Cavaliers were good for one wild charge and then lost all order, and with it all mobility. Cromwell's Ironsides maintained, or quickly recovered, their cohesion in battle. They are the ancestors of our mechanised brigades, and show us what to aim at with them.

Frederick extended and improved upon Cromwell's methods, and again, by means of discipline, training and careful thought of equipment, produced a mobile

[1] *Fairfax Correspondence*, p. 56.

striking force which for purposes of battle has not been surpassed in war since his day. Then came a steady and continuous improvement in fire-arms and the days of the supremacy of infantry in battle. First the musket and then the rifle in the hands of steady troops could, except on rare occasions, when surprise or some temporary disorder gave cavalry a fleeting advantage, repulse the shock action of mounted troops. So we find the rôle of cavalry changing and Napoleon using his cavalry masses mainly for exploration and to complete victory by pursuit. Only rarely did he attempt to use his horsemen for shock action against infantry in good order, and then usually as a last desperate expedient, when other means of obtaining a decision had failed, as, for instance, at Waterloo, when it was vital for him to overcome the British resistance before the attack of the Prussians on his flank could be developed. Then, after the attacks of the French infantry on Wellington's front had been repulsed, his cavalry charged the British squares again and again, only to fail. The days of cavalry as a mobile striking force in battle were numbered, and though cavalry leaders still had faith in the charge as a means of obtaining decision, in fact the most it could achieve, until infantry had been thrown into disorder by other forms of attack, was to gain time, usually at a great sacrifice.

The American Civil War gave rise to a new development in mounted action. Neither Federals nor Confederates had at the beginning of the war any considerable body of trained troops. It was therefore useless to attempt cohesive shock action by mounted men, since this required longer training and stricter discipline than any other form of attack. But the Southern

gentry lived in the saddle and were good shots, therefore the Confederate mounted troops became, in the natural course of events, mounted riflemen, whose object was to make fire power mobile rather than to charge with sword or lance. Under Jeb Stuart, a born leader of mounted men, the Confederate cavalry made themselves famous by their raids round the enemy's lines, by which they created alarm and disturbance in the Federal rear, and gathered valuable information, but neither they nor the Federal cavalry under Sheridan, which copied and eventually emulated them, ever succeeded in being a decisive factor in a set battle, save in the one instance of Sheridan's defeat of Early in the Shenandoah Valley, though they proved to be invaluable in all other functions of mounted troops.

The lessons to be learned from Sheridan and Stuart were obscured by the fact that neither had been opposed to trained and disciplined cavalry, and the old methods of cavalry training with the old equipment continued in Europe with the lingering hope that cavalry might still decide the issue of battle. Henderson sums up the results of that lingering hope in the nineteenth century: "The successes gained by shock tactics where anything larger than a regiment was engaged are confined to the following:

1. The victory of the British Heavy Brigade at Balaclava.[1]

2. The charge of some twenty squadrons at Custozza, manœuvring by brigades, which checked and partially routed three divisions of most indifferent infantry.

[1] This was a charge against cavalry and was a fine feat. The charge of the Light Brigade on the same day against guns and infantry in position, supported by cavalry, was a gallant but costly blunder.

3. The charges of the Austrian cavalry at Königgrätz, which drove back the Prussian horse and enabled Benedek's defeated troops to get away safely.

4. The charge of six squadrons at Mars-la-Tour which went through a French corps largely composed of recruits.

5. The defeat of 2500 French horsemen, also at Mars-la-Tour, by about the same number of Germans.

6. The charge of the 11th and 17th German Hussars near Vionville against retreating infantry.

7. The charge of the German brigade at Loigny-Poupry, where a small brigade charged down on the flank of a large body of half-trained French infantry and put them out of action for about three-quarters of an hour.

"Such is the record: one great tactical success gained at Custozza, a retreating army saved from annihilation at Königgrätz, and five minor successes, which may or may not have influenced the ultimate issues. Not one single instance of an effective and sustained pursuit, not one single instance, except Custozza, and then the infantry were armed with muzzle-loaders, of a charge decisive of the battle; not one single instance of a force larger than a brigade intervening at a critical moment. And how many failures! How often were cavalry dashed in vain in reckless gallantry against a thin line of rifles." [1]

But if the results were poor and obtained at undue cost, the belief in the effect of shock action by a mobile force was sound; the difficulty was that the cavalry leaders had not the means to give effect to their faith. They clung obstinately to methods which in the

[1] *The Science of War*, Henderson, p. 54.

changed conditions of armaments were out of date. Now the means are again in sight, and it is we who are leading the way to the re-creation of the mobile striking force. We are making these new means available for the old methods. The internal combustion engine has to a great extent taken the place of the horse as a means of locomotion, and we are adapting the engine to tactical use in war. We are seeking now to make the same use of the engine for the purposes of battle as Cromwell and Frederick made of the horse. That, as I see it, is the object of mechanisation.

It is not the first time that we have shown the way to the military world. The bowmen of Agincourt put a term to the supremacy of the armoured knight; when Cromwell's cavalry was at its zenith, Vauban was just beginning that work from the domination of which Marlborough rescued the military thought of his day; [1] our line in the Napoleonic wars ended the supremacy of the infantry column, and, if I may complete my survey of the development of cavalry, we led the way before the Great War in the modernisation in Europe of cavalry tactics and equipment. We learned to do that, it is true, more from our own experience than from the experience of others. It was our contact with the mobile Boer riflemen rather than study of the methods of Stuart and Sheridan which caused us to make the rifle the chief weapon of the cavalryman and to train him to fight on foot. A remarkable contrast between the new methods of cavalry action and the old was furnished in the early days of the Great War on the Western Front. With our Expeditionary Force was Allenby's cavalry division; with the French Vth

[1] Vauban began work in 1650 and Cromwell won "the glorious mercy of Worcester" in 1651.

Army on our right was Sordet's cavalry corps of three divisions. Sordet with his cavalry mass, trained and armed to act mounted, was sent off into Belgium, which he penetrated to within a short distance of Liége. Except for some news gleaned from a captured German officer, he gained little positive information, and he was not instrumental in delaying the German advance in any way. These meagre results were obtained at the price of the exhaustion of his horses, and not until he appeared on our left at the battle of Le Cateau was he able to exercise any effective influence on the operations. Allenby, on the other hand, saving, under Sir John French's instructions, the main body of his cavalry for co-operation with the other arms, was able, by sending out small patrols of French-speaking officers and men to telegraph and telephone stations on the general front from which the German advance was expected, to obtain good information, at the price of small effort, and to make a far truer appreciation of the actual position before the battle of Mons than prevailed at our G.H.Q.,[1] while when it came to action his cavalry performed invaluable service in covering the retreat of our infantry columns.

We have then some reason for believing that we can think for ourselves and to tread new paths with confidence, while all the experience of war teaches us that we can never be wrong in seeking to make power mobile. This, the true object of mechanisation, has been somewhat obscured in the discussions which its introduction has aroused by the stress which has been laid in some quarters upon the importance of armour. It is natural that the achievements of tanks in the

[1] Cf. *Military Operations, France and Belgium*, 1914, Appendix 12 (1).

Great War should have impressed us, and it is equally natural that there should be a strenuous effort to avoid in the future the tremendous losses which the assaults by unprotected infantry upon entrenchments in the Great War caused. It was the effect of fire upon unprotected infantry which caused infantry to dig in and therefore to lose mobility, and the purpose of the introduction of tanks was to neutralise and overcome the effect of fire from trenches, and by this means to restore mobility. We have to remember that when tanks first made their appearance on the Western Front the trench barrier was complete, therefore penetration was the only form of attack possible. In enabling us to penetrate the enemy's trench barrier, tanks proved invaluable, but they were not effective by themselves. They required aircraft to obtain by observation and photography detailed information about the ground over which they would have to move; they required artillery to prepare the way for their advance and keep down the enemy's artillery fire, to which they were very vulnerable; and they required the support of infantry to complete and confirm the success they had won. Even then the experience of the Great War shows that the effective action of tanks was of comparatively brief duration, and that they quickly lost the power of sustained and concerted action. On August 8, 1918, the great day in the history of the tanks, 415 tanks went into action. On August 9, 145 only were engaged and tank action had already become spasmodic, and on the 10th the number which could be employed had fallen to 67. In the four days of August 8 to 11, 688 tanks of various types had been employed, and of these 480 had either been damaged by enemy fire, or had completely broken down, or required to be over-

hauled. The charge of the medium tank is then rather like the charge of Rupert's cavalry. Something more is needed to obtain sustained effort.

There are two other general considerations which we must keep in mind when thinking of the use and value of the tanks. The first of these is that while it is possible during the course of a war to prepare a new weapon to which the enemy cannot in time find an adequate answer, it is very difficult to do so during a long peace. Information gets about and the enemy is prepared. It is true that the effect of Austrian and German heavy howitzers upon the detached forts of the Belgian fortresses came as a surprise. It was known that they possessed these weapons, but their effect was not anticipated. This, however, is an exception. As a general rule reliance upon a particular weapon in a war between civilised nations, in which the knowledge of the progress of science is approximately equal, has proved disappointing. In 1870 the French placed great reliance on their mitrailleuses, but they proved to be incapable of staying the march of the Germans into France. In 1914 the French again had great faith in their 75's, undoubtedly the best field gun of the day, but in Lorraine they proved to be powerless against German entrenchments, and in the Ardennes the wooded and broken nature of the country rendered them ineffective, when the French IIIrd and IVth armies attempted to break through the right centre of the German line. The chance of obtaining decisive surprise by means of any one weapon, which has been in existence for any length of time, is small.

The second consideration is that the heavy armoured tank has certain definite and unavoidable handicaps,

which must be brought into relation with its undoubted advantages. From the day when armour was first placed on ships of war there has been a protracted struggle between the naval gun and naval armour. Improvements in the power of ships' engines and increase in tonnage have enabled defensive armour to keep pace with attacking power. But an armoured vessel on land—the tank—has a more difficult contest before it. The whole of it is exposed to fire, a great part of a battleship is below the surface of the sea, while the problem of overcoming friction is much more serious on land than it is on water. In the struggle between gun and armour the gun has advantages on land which it has not on the sea. It is by mobility rather than with armour that the attacking mechanised force will overcome the gun of defence. Mobility, sustained, cohesive mobility, is the object, and if we keep that in mind, and remember that the prime purpose of the reintroduction of armour to war is the restoration of mobility, we shall not go far wrong. In this search for mobility we must hold the balance between armour and power of movement. Since the fact that infantry in the Great War was unprotected was one of the chief reasons of its loss of mobility, it is clear that armour has a great part to play in the restoration of mobility, but since offence is the one means of obtaining conclusive victory, armour, that is, protection, must be a means to the end, not an end in itself. So too the balance must be held between fire power and mobility. The main reason why the French, in their preparations for the Great War, rejected field howitzers, medium and heavy artillery, and pinned their faith to their 75's, was their fear that a heavier type of gun and the transport of its ammunition

would hamper mobility. In the event they lost mobility from lack of fire power.

In the creation of this mobile striking force tanks, then, of various types have their place, and a very important place. So, as we have seen, has mechanised transport, so has cavalry endowed with increased and protected fire power, so has tractor-drawn artillery, so has mechanically transported infantry. In fact we need a scientifically organised adaptation of the new means of movement, which the internal combustion engine has provided, to the varied requirements of war, and that is, I take it, what we are now seeking.

In that search we, as I said in Chapter I, have the advantage of being a great manufacturing country, and we have the further advantage that in our densely populated island, with its network of good roads, motor transport is more highly developed than in any other country in the world. We have therefore a reserve power of manufacture of the right kind. Lastly, the process of mechanisation promises to eliminate or at least to reduce a disadvantage from which we have long suffered. I have said that there is not much difference in the leg power of a trained British, French or German soldier, but our military system makes it inevitable that on mobilisation the ranks of our home battalions should be filled with a large number of physically untrained men. These battalions normally contain a high percentage of young soldiers unfit to take the field, and are often under establishment, the majority of the older soldiers being in the battalions abroad. In some of our battalions which went to France in August 1914, the reservists in the ranks numbered as much as 60 per cent. of the strength, and many battalions had more

than 50 per cent. Men who had been for some time in civil life are not fit for long marches in new boots, and therefore our home infantry is deficient in mobility at the outbreak of war, when mobility is often most needed, despite the attention which we give to physical training of the men serving with the colours in time of peace. This disadvantage disappears when infantry is transported in buses or lorries.

We have then more reason to welcome the intelligent application of machines to increase fire power and the mobility of fire power than any other country. I propose to consider how this mobility of fire power can best be used in war when I come to the principle of concentration.

The elements of mobility then are:

(1) Training and physical fitness of the troops.

(2) Organisation of the services by transport and supply.

(3) Staff work, which means the organisation of movement so as to obtain the maximum of effort with the minimum waste of power.

(4) Generalship, which in relation to movement means the correct choice of object, care for security, and the appropriate distribution of the parts of an army.

(5) The ultimate object of mobility being to obtain superior power in battle, the attainment of this is much facilitated if there is one part of an army which possesses highly organised and highly mobile power. Mechanisation promises to provide this part.

CHAPTER X

THE PRINCIPLE OF SURPRISE

Surprise by concealment of object—Marlborough's march to the Danube—Napoleon in 1815—Surprise by secrecy of preparation—The Germans in August 1914—Surprise by doing what is difficult—The German capture of Liége—Our appearance at Mons—Allenby's concentration in September 1918—The German concentration in March 1918—We lost opportunities for surprise at the Dardanelles—Surprise by new weapons and new methods—The German use of gas in April 1915—Our use of tanks—The German artillery at Verdun—Secrecy and information to our own troops and our own public—The avoidance of surprise—Conclusions.

We are all conscious of the moral effect of surprise. Surprise causes us to say and do that which, when we have recovered from it, we recognise that we should not have done, and since moral influences are supreme in war, surprise has always been the most effective method of obtaining victory. Clausewitz, as I have said, put a talent for artifice and stratagem amongst the chief characteristics of generalship, and Henderson places a capacity to mystify and mislead the enemy in the same category. The methods by which the great commanders have obtained surprise are, then, worthy of study. We find that they have always had a clear and definite object in view, a just sense of what is the decisive front, knowledge of the enemy's characteristics, and of how to play upon his fears, that they have known how and when to dare, have been able to keep their own counsel, have taken meticulous pains in

the preparation of their movements, and that their chief instrument has been mobility.

With the memory of the drab days of trench warfare fresh in our minds, it might seem that we should not expect to see repeated in future wars such dramatic feats as Peterborough's capture of Montjuich and Wolfe's climb up the cliff to the heights of Abraham; but the coup by which the Germans captured the town of Liége in August 1914 may fairly be ranked with these feats. There will still be in war ample scope for doing the unexpected, for achieving the apparently impossible, and we can find many hints from the past as to how to set about this search for surprise. Clearly if the enemy is to be surprised he must be kept in ignorance of our object, and since the general direction of the movement of any large body of troops cannot for long be concealed, one of the most effective means of obtaining surprise on the grand scale, strategical surprise, is to appear to aim at one object while in reality we have another which is not disclosed until there is no time for the enemy to meet it effectively.

Few commanders in war have had greater difficulties to overcome in seeking surprise than had Marlborough in 1704. The forces of the Grand Alliance in that year were divided, the British and Dutch forces under Marlborough being in the Netherlands, the Austrians on the Danube. Their enemies the Franco-Bavarian armies were united, they had the advantage of interior lines, and the campaigns of the previous year had opened the way for them down the valley of the Danube towards Vienna. In the north the campaign of 1703 had sufficiently secured the southern frontier of the Netherlands, but the French in Brabant had constructed formidable lines of defence, supported by

numerous fortresses, and Marlborough saw that there was little prospect of obtaining a decisive success in that theatre of war before the Franco-Bavarian army had defeated the Austrians and perhaps forced the Emperor to make a separate peace. The valley of the Upper Danube was the decisive theatre, and junction with the Austrians on that river, while providing for the security of his base, Holland, was Marlborough's object. Such a movement entailed a daring flank march across the enemy's front, only partially protected by an inferior force of allied troops under the somewhat lethargic command of Prince Louis of Baden, who held the lines of Stolhofen at the northern end of the Black Forest.

Secrecy was therefore essential to security. The real object of the movement had to be concealed from the enemy, and as it happened it had also to be concealed from Marlborough's allies the Dutch, who would never have consented to uncover their country by transferring the forces, upon which they relied for protection, into the heart of Germany, despite all Marlborough's assurances that he would provide sufficiently against the violation of their territory. The immense pains, which Marlborough was at, to remove the apprehensions of his allies by cajolery, argument, and deception is in very marked contrast to McClellan's casual treatment of Lincoln in not dissimilar circumstances. He won the consent of the Dutch States-General to a movement to the Moselle, where his apparent object would be to attack the Franco-Bavarian centre, informed the King of Prussia that he intended to operate on that river, and had the Prussian and Hanoverian contingents sent to meet him at Coblentz, where the Moselle joins the Rhine,

and arranged for contracts for supplies to be placed in Frankfort and Mayence. The whole of these arrangements, to which Marlborough gave the closest personal attention, were equally suitable either for a campaign on the Moselle or upon the Upper Danube, and it was not until his junction with the Austrians upon the latter river was practically assured that Marlborough's real object was disclosed to friend and foe.

Here then we have one example of how the preliminary movements of an army may be carried out in such a way as to leave the enemy in doubt to the last moment as to where the blow will fall, and also of how by a careful calculation of the factors of time and space an operation, dangerous in itself and therefore not likely to be the one which the enemy would expect, may be carried through with safety. Napoleon's last campaign furnishes us with another example of how strategic surprise may be obtained by concealing the object to the last moment. When he escaped from Elba and landed in France, the general feeling in Europe was that this was the last wild throw of a desperate gambler. No one, as I have said in Chapter I, believed in May 1815 that he would venture with an army of 130,000 men, hastily collected, to invade Belgium, and attack the allied armies in that country, numbering 210,000 men, while other allied armies were preparing to move against him. English society regarded the coming campaign as a military parade, and its members jostled each other in their efforts to get to Brussels in time to witness the final overthrow of the Corsican adventurer. You will find in Thackeray's *Vanity Fair* a very true picture of the feeling both at home and in Brussels before and after the battle of Ligny, of the sudden change, from overweening

confidence to consternation, which surprise can bring about. And how did Napoleon obtain his surprise? He knew that the communications of the British Army assembled in the southern part of Belgium would run north-westwards to the coast, those of the Prussians generally eastwards through Liége. By making his concentration south of the Sambre around Philippeville, Beaumont and Solre-le-Chateau, he could threaten with equal facility the communications of either army, and thus each was unwilling to complete its concentration until the direction of the enemy's advance was clear. Then having decided to attack the Prussians first, he made a feint at Mons against Wellington's communications, which further delayed the assembly of the latter's army, concentrated rapidly and broke through the intended point of assembly of the Allies at Charleroi, and detaching Ney to oppose Wellington at Quatre-Bras, while the bulk of the latter's forces was still at a distance, defeated Blücher at Ligny before the whole of the Prussian army could reach the field. Napoleon had by concealing his object obtained surprise, and won the first move in a campaign in which the odds seemed to be overwhelmingly against him.

But, I may well be asked, what applications have these examples from the past to the conditions of these days of rapid communication and of aircraft? We are apt to be obsessed by the monotony of trench warfare on the Western Front, where strategic surprise, surprise by manœuvre, almost disappeared, and such surprise as was obtained was mainly gained by other means to which I will refer. We forget that August 1914 was as prolific in surprises as have been the opening phases of any other war, and that if the

surprises of that month were obtained by other methods than those employed by Marlborough and Napoleon, surprise by concealment of object was not altogether eliminated either then or later by the deadlock of trench warfare.

Let me take first the surprises of August 1914 and elaborate the illustrations already given in Chapter I. The first of these were obtained by the Germans, and the most important of them by means of secrecy of preparation. It is not the case, as is often supposed, that the French were unprepared for the German invasion of Belgium. Their Plan 17 was in fact drawn up with such an eventuality in view. But that plan was based upon an erroneous estimate of the strength which the Germans would deploy in their front line. The French did not believe that the Germans would be strong enough on the Western Front to resist an attack in force in Alsace and Lorraine, hold the French centre, and at the same time carry out a great turning movement through Belgium north of the Meuse. When the evidence of the strength of that turning movement became definite there was at first no anxiety at French G.H.Q., because the conclusion drawn was that the Germans must have weakened their centre, which the French were preparing to attack with their IIIrd and IVth Armies. The diary of Field-Marshal Sir Henry Wilson, who was then Deputy Chief of the Staff at our G.H.Q., reflects faithfully enough the opinion held at French Headquarters.

On August 19th he wrote: "At 7.30 a.m. I went to Sir John's house, and he and Murray [1] showed me an appreciation received last night from Joffre. . . .

[1] Field-Marshal Sir John French and Sir Archibald Murray, his Chief of the Staff.

Joffre suggested either heavy masses north of the river which I put at four to six corps, or small forces there which I put at one to two corps. In the first case the Ist, IIIrd and XVIIIth Corps[1] will cross the Sambre and help us to deal with them. In the latter case these three corps will cross the Meuse between Namur and Givet and will help the IIIrd and IVth Armies, while we deal with the troops north of the river.

"In the afternoon a colonel of Chasseurs, who passed through here yesterday, leaving Joffre's letter, and went on to the King of the Belgians at Louvain, came to see me. He reports that the Belgians got pushed back yesterday. He says he thinks that Joffre leans to the belief of a large turning movement in the north, but that the staff incline to the belief that the main attack will be towards Mézière–Verdun. Personally I incline to the big turning movement—which is German but would suit us."

The next day, August 20th, comes the entry: "Much information in this morning, all pointing to an immense German movement over the Meuse. To-night we think we have determined that the enemy has three cavalry divisions and six corps over the river. The more the better, as it will weaken their centre."

On August 20th the Germans had occupied Brussels, and had five cavalry divisions and 10½ corps north of the Meuse, and were still able to oppose slightly superior strength to the proposed attack in the Ardennes of the French IIIrd and IVth Armies. The Germans had succeeded in surprising the French by bringing their reserve corps at once into line with their active

[1] These belonged to Lanresac's Vth Army, which was on our right.

corps, and this had been made possible by secret preparations for improving the efficiency of the reserve corps. Ludendorff, in his *The General Staff and its Problems*, Vol. I, quotes a memorandum dated December 1912, signed by von Moltke, which he drafted for his Chief of the Staff. In this memorandum the following appears: " It is absolutely essential that we should rejuvenate and develop the existing reserve formations by getting rid of the Landwehr element. This will be possible by increasing the peace establishment. The reserve units must be given extensive opportunities for training. With a view to a better supply of active officers for these units, the number of officers, especially captains, must be increased. Further, the reserve units must receive a better supply of machine guns and field artillery."

Effect was given to these proposals, with the result that the German strength on the Western Front was increased to an extent which entirely upset all French calculations. These measures taken by Germany between 1912 and 1914 are worthy of careful study by us as indicating methods by which the efficiency of our Territorial Army could be increased and its preparation for active service expedited.

But this secret development of the efficiency of the reserve formations was not the only means by which the Germans obtained surprise at the outbreak of war. In estimating the strength of the German forces which had crossed the Meuse, the French had not considered it possible that so large a body as the whole of the First German Army would be able to pass through the narrow defile between Liége and that curious southern extension of Holland known as the Maastricht appendix. In order to do this six corps of the First Army, each

composed of two divisions and corps troops, had to march through the town of Aix-la-Chapelle. Von Kluck, the Commander of this Army, says of this movement: " The march formations of the First Army consisted of a deep column of two corps on each of the three roads, passing close to one another, through Aix-la-Chapelle, and which did not greatly diverge between there and the Meuse, north of Liége, or even for some way beyond the river. A General was appointed to look after each of those three roads, and to issue all the necessary routine orders for the march. Billeting and supply columns were hurriedly sent forward from the railway base, as the Army Commander had ordered that every man was to be fully rationed by the time the Meuse was reached. Howitzer batteries were put into position near Aix-la-Chapelle by order of the Army Commander to guard against air attacks, and all the roads along the Dutch frontier on the right flank of the advance were blocked. The Army Commander also ordered that the roads of advance should be thoroughly inspected and fully repaired, and all bridges and other constructions guarded.

" Whether considered collectively or in detail, these movements and the careful supply of such a mass of men by these roads all passing through such a comparatively small town, form a most valuable mine of information for instruction and historical purposes." [1]

If we remember that Field Service Regulations II. 22 (4) says, " The difficulties of maintenance are increased if more than one division is required to march on the same road," we will agree, I think, that von Kluck's claim is justified. An extremely difficult movement had been attempted and carried through

[1] *The March on Paris*, 1914, von Kluck, p. 15.

successfully, and this had contributed materially to the concealment of the German strength north of the Meuse.

But the surprises of the first weeks of the Great War on the Western Front were not all on one side. We surprised the Germans by our presence at Mons, and this surprise was due to three causes. The first was that the Germans, who had had no experience of the mobilisation of a voluntarily enlisted army, over-estimated the time it would take us to prepare our Expeditionary Force for the field and ship it across to France. That advantage we owe to the scheme of reorganisation of our army which the late Lord Haldane carried through when he was Secretary of State for War. The second cause of the German miscalculation was that there were six possible ports on the coasts of Belgium and France at which we could disembark, and the Germans guessed wrong. The third cause was the efficiency of our secret service, which had marked down the German spies and prevented any information getting out from Great Britain. No one would have believed before the war that the strength of an army of some 250,000 men, which had been marching through Belgium for more than a week, should have been under-estimated by opponents, provided with aeroplanes, to the extent of nearly two-thirds, nor that another army 100,000 strong should have begun landing in France on August 9th, have been conveyed through some 200 miles of that country by rail to its place of concentration, and then marched forward without an inkling of its presence reaching the enemy until August 20th. So little did we ourselves realise the success with which our movements had been concealed, that the military correspondent of *The Times* was allowed to announce on August 20th that our Expeditionary Force had

landed, and this was the first information of that fact which reached the Germans.[1] Fortunately the information conveyed in *The Times* was so vague in form as not to be of much use to the enemy, while reconnaissance revealed little to him. At 9.45 p.m. on August 22nd a German aeroplane reported to the Headquarters of the Ist Army that there were " no signs of enemy activity on the line St. Ghislain–Mons," [2] a line which we had occupied on the forenoon of that day.

All this shows that despite aircraft, spies and improved means and rapidity of communication, there is as much opportunity as there ever was for artifice and stratagem in war. It is, in fact, rather easier to deceive aircraft than it used to be to deceive reconnoitring horsemen. An empty column of buses looks the same to an airman as one that is full of troops, and the Great War disclosed to us the possibilities of camouflage and of movements by night in attaining concealment.

A most interesting example of what can be done even in trench warfare by means of careful preparation and ingenuity to conceal the object from the enemy is furnished by Allenby's arrangements for his final campaign in Palestine which began on September 18, 1918. Allenby had decided to break through on the enemy's right on or near the coast, because the country there offered greater opportunities for his fine force of mounted troops than any other part of the front presented. He was therefore at pains to attract the attention of the Turks to their left. He kept his mounted troops on his right in the Jordan valley to the

[1] *Der Marne feldzung*, 1914, von Kuhl, p. 38.

[2] *Ibid.*, p. 45. On the same day the presence of British troops was notified to the enemy by contact with a cavalry patrol and by shooting down one of our aeroplanes, but these indications were no proof of the landing of the whole of our Expeditionary Force.

last possible moment, and then moved two cavalry and one infantry division and many other units by night from the Jordan valley to the Judean hills on the coast. The camps of the troops already on the coast had some time previously been spread out. For instance, the battalions in reserve had each occupied with half a battalion a camp which would hold a whole battalion. As the troops came in from the right, each of these camps was filled by a whole battalion, so that no change was visible from the air. The camps in the Jordan valley were left standing, additional camps were added, and during the day-time mules were kept busy dragging bundles of brushwood to raise dust, and so make observation difficult and give an appearance of activity. Fifteen thousand dummy horses filled with straw occupied the deserted horse lines, and battalions from Jerusalem were marched down in daylight to the Jordan on several days in succession and brought back in lorries by night. Elaborate and very public preparations were made for transferring G.H.Q. to Jerusalem, where an hotel was taken over, from which officers on leave were turned out, much to their indignation, and from which ran a full equipment of telegraph and telephone lines. Lastly, on the eve of the battle our Arab Allies under the direction of Lawrence attacked the railway about Deraa junction behind the Turkish left, and the junction was simultaneously bombed heavily by the Air Force. All these artifices, combined with the superiority which our airmen attained, enabled the concentration on the coast to be completed without any indication of it reaching the enemy, and the battle was practically won before a shot was fired.[1]

[1] This description is taken from *The Palestine Campaigns*, Wavell, p. 200 *et seq.*

In their great attack on the Western Front in March 1918 the Germans obtained surprise by methods which were very similar to those used by Napoleon in 1815. The divisions which they brought across from the Eastern Front were so placed that they could be moved equally well against the Arras–La Bassée front with the coal-fields of Brouay as their objective, the Arras–St. Quentin front with the junction of the British and French armies as their objective, or the St. Quentin–Rheims front with a drive towards Paris as the objective. The British Military Representative at the Supreme War Council at Versailles expected that the attack would be made on the Arras–La Bassée front, and that it would probably be delayed until the end of May, when the Germans would be at their greatest strength. British G.H.Q. expected the attack which actually took place on the Arras–St. Quentin front, and even forecasted the exact date of the attack, while the French Commander-in-Chief Pétain, even after the attack had begun, thought it might only be a preliminary to an attack on the Rheims front, and for that reason hesitated to send us reinforcements. Therefore, even though the attack on our front was anticipated by us and we had made elaborate preparations to meet it, the Germans succeeded by their preliminary dispositions in keeping the Allies in doubt, and by this means obtained some of the advantages of surprise.

We had one great opportunity of obtaining surprise by concealment of objects in the Great War which we threw away. When in November 1914 Turkey entered the war there were two places where a combined naval and military expedition could be expected to achieve important results against the new enemy.

The first of these was the Dardanelles, which led to Constantinople, and the second was at Alexandretta at the head of the Gulf of Iskanderun, where a landing would threaten the Turkish communications both with Palestine and with Mesopotamia. These two objectives were sufficiently adjacent to have enabled us to keep the Turks in doubt at which an expedition, based on Egypt, was aiming. Unfortunately on November 3, 1914, the British and French fleets in the Mediterranean bombarded the outer forts of the Dardanelles with the faint hope that such a demonstration would influence the anti-German party in Constantinople, while between December 18 and 22, 1914, and again on January 3, 1915, landing parties raided and did some damage to the railway line near Alexandretta, but the only permanent result was that the Turks were put on the alert at both places. Sir William Robertson's comment on the first of these adventures runs: "The orders to bombard emanated only from the Admiralty, and the War Council was not consulted. Leaving aside the impropriety of opening up operations in a new quarter without Government sanction or knowledge, the bombardment undoubtedly was, as the naval authorities stated before the Dardanelles Commission, 'unfortunate' and 'a mistake,' since it was calculated to place the enemy on the alert, and so jeopardise the possibility of effecting a surprise should a serious attack have to be undertaken at a later date." [1] Naval raids on a coast have no more permanent effect than have cavalry raids behind an enemy's lines unless they are correlated with other operations, or can be maintained so as to interrupt the enemy's communications for a considerable period, and should only be

[1] *Statesmen and Soldiers*, Robertson, Vol. I. p. 80.

undertaken when due consideration has been given to their bearing on the attainment of the object of the war, and their possible influence on future plans has been duly weighed. Only in this way can we hope to be able to make the fullest use of the mobility and wide choice of objective which sea power confers on us in securing surprise.

As regards the German attack on the British front in March 1918, the surprise effect obtained against us, as distinct from the Allies generally, took the form of a more rapid and extensive success than had been anticipated, and was due to the methods used, not to concealment of purpose. As the Field Service Regulations II. 8 (iii.) say, "the use of new weapons or a novel use of existing weapons" is an important element in obtaining surprise, and for a long time during the period of trench warfare on the Western Front this was the only means by which surprise could be obtained. At the end of 1914, when the trench barrier on the Western Front was complete and extended from the North Sea to Switzerland, both sides were short of munitions. Neither we nor the French nor the Germans had anticipated a form of warfare in which very large numbers of guns would be in action every day, and the first attempts made by ourselves and the French soon disclosed the fact that shells in great quantities were necessary to prepare the way for attack on entrenched lines. While the shells and guns were being manufactured, the trenches were being improved and the network of barbed wire in front of them was being extended, so that more and more shells and more and more guns became necessary. Thus until a late period of the war it was not possible to make preparations for attack upon any considerable number

of different sectors of the front, while the preparations required were so elaborate as to make it very difficult to conceal them from the enemy. Surprise by mobility and manœuvre had disappeared.

The first surprise by the use of new weapons was effected by the Germans in April 1915, when they employed poison gas in the second battle of Ypres. We and the French, relying on the Hague Convention of July 29, 1899, had not expected that form of attack. To that Convention we, the French and the Germans had been parties. The wording of the relevant paragraph of the Convention runs: "The Contracting Parties agree to abstain from the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases." Now in April 1915 the Germans did not discharge poison gas from projectiles, but from cylinders brought up to the trenches. When the Convention was drawn up none of the parties to it had foreseen trench warfare in the field, and cylinders could not be employed in field warfare, such as till then had been normal. It therefore occurred to no one to prohibit their use. So the Germans were within the letter of their agreement, though they undoubtedly broke its spirit.[1] This is an example of the extreme difficulty of providing for future developments of warfare in international agreements. Human imagination is altogether too limited to be able to forecast correctly the possibilities of human ingenuity. In the event the Germans were unable to take full advantage

[1] It is said that Germans used some gas shells in April 1915, which is unquestionably a breach both of the letter and of the spirit of the Convention. There is some conflict of evidence as to this, and there is no doubt that the main discharge was from cylinders. See *Military Operations, France and Belgium*, 1915, p. 193 *et seq.*

of the surprise they obtained by the use of gas because of lack of experience in its use, and this is a common occurrence when new weapons are used for the first time in war. Co-operation is an essential element of success, and for co-operation, as we have seen, it is necessary that each part of an army should know the capabilities and limitations of the other parts, a result only to be obtained by experiment and training.

We had a very similar experience in the first use of our new weapon, the tank, during the battle of the Somme in September 1916. The results then obtained by tanks, used in small numbers, were disappointing, and so little were the Germans impressed by them that they fortunately made very little effort to develop the tank for their own use. Even at Cambrai in November 1917, when we obtained surprise by using tanks in large numbers to replace the long preliminary bombardment which had heralded our previous assaults on the German lines, only a moderate degree of success was obtained. But by these experiments we learned the weaknesses of the first tanks and how to eliminate them, we learned the kind of help which they required to make their action effective, and we were able to train our infantry to co-operate with them and to have confidence in them. It has been said that we were wrong in disclosing to the enemy the existence of the new weapon in September 1916 before we were ready to use it in quantity, but I suggest that a careful study of the facts will show that it is extremely doubtful whether we could have obtained the improved tank, which was so brilliantly successful on August 8, 1918, and still more doubtful whether we could, without experience in the use of the new weapon in the actual conditions of war, have attained the degree of co-operation which

was needed to extend and complete the success won by the tanks.

The surprise effect which the Germans obtained with their heavy howitzers against the Belgian forts is in a different category. In this case the new weapon was used against material first and against troops incidentally, there was no need to practise co-operation with the other arms, and careful tests had been carried out in Austria before the war of the effect of heavy howitzer fire upon cupola forts. As a general rule it may be said that it is so difficult to forecast correctly the moral and material effect of new weapons, which have not been tested under the conditions of war, particularly when the co-operation of troops is needed to complete their work, that reliance upon them alone to produce surprise is very much of a gamble.

This also applies to the novel use of existing weapons. In this too the first surprises in the Great War on the Western Front were obtained by the Germans, who had the advantage of being able to experiment on the Eastern Front against the badly armed Russians. On February 21, 1916, the first day of the battle of Verdun, the Germans, though very inferior in numbers to the Franco-British forces on the Western Front, obtained a more important success than the latter had been able to gain in any of their attacks in 1915, and this success was mainly due to novel artillery methods, which had been developed from experience gained against the Russians, and the success won against our Vth Army on March 1918 was largely due to the novel use of gas shell in great quantities. In the matter of artillery the Germans had the additional advantage over us of having a far larger reserve of trained officers to draw upon. Long training is necessary before novel methods

can be introduced with much hope of success. The moral of all this is that to obtain surprise effects with weapons in war a great deal more is needed than the production of a clever invention or a new process.

It is obvious that secrecy is necessary if surprise is to be obtained. But the problem of how to secure secrecy is in these days, when news travels fast, a very difficult one. Information which is common knowledge in an army is most probably known to the enemy, and therefore it is usually just as necessary to deceive our own troops as it is to deceive the enemy. On the other hand, troops cannot co-operate if they do not know what is expected of them. A commander therefore needs nice judgment in deciding when and how far to divulge his plans to his own army. Very much depends upon the amount of preparation which is required from the troops. The elaborate preliminary arrangements required for an attack upon entrenched lines makes it impossible to conceal from the troops what is intended, and therefore news of what was afoot often got to the enemy during the Great War. One of the causes of the failure of General Nivelle's great attack in 1917 was that details of it were obtained by the Germans from prisoners, and the German attack on the Rheims front in July 1918 failed disastrously mainly because General Gouraud had information of it from German prisoners. In mobile warfare it is much easier to keep plans from the troops without detriment to co-operation in battle. It is rarely necessary that troops setting out on a secret movement should know what their destination is, and the wise commander will follow Marlborough's example. His men when they started from the Netherlands had no notion that they were going to the Danube.

A commander in a war which calls for the development of all the resources of the nation has an even more difficult balance to hold. He has to keep the confidence of his Government, which expects to be informed of what is going on, while the morale of the people at home is only second in importance to the morale of the army in the field, and if that morale is to be preserved the public must be given a reasonable degree of information. On the other hand, it may be taken for granted that information which is known at home is very soon known to the enemy. We have seen that the news published in *The Times* on August 20, 1914, was the first intimation which the Germans received of the landing of our Expeditionary Force. The classic example of important information getting out through the Press occurred during the Franco-German war in 1870, when the first move of Marshal MacMahon's army to relieve Metz, which the Germans were investing, was obtained by them from *The Times*, and this news enabled them to plan the operation which resulted in the surrender of MacMahon at Sedan. With these things in mind the natural tendency of soldiers is to withhold information altogether, but to do this is to overlook the fact that there are other matters to be considered besides that of secrecy. A great deal depends, in the handling of this question, upon a true understanding of the national character. The French authorities thought it desirable to keep the extent of their failures in August 1914 secret from their people, but it is a mistake to attempt to conceal from the British public the full extent of a defeat, for it is happily one of our characteristics that we brace ourselves for a greater effort when things are going badly, and nothing shakes the confidence of our public more

than the suspicion that it has not been told the worst. In the Russo-Japanese war the Japanese, who as a people are addicted to secrecy, kept all Press correspondents at a distance from the scene of operations and their people very much in the dark, but in that war they were uniformly successful, and there was no test of the effect of such measures in bad times. Broadly speaking, in this as in many other human affairs, nothing succeeds like success, and a public which sees the results of secrecy will accept it readily, but in a long-drawn-out and doubtful struggle, such as the Great War, it is necessary to keep the public informed if national morale is to be maintained. We had not before the Great War sufficiently thought out this problem of balancing the advantages of secrecy and information, and we made many mistakes in consequence. The late Lord Rawlinson came home for a brief interval towards the end of the first battle of Ypres, and was impressed by the lack of public knowledge of the achievements of our troops. On returning to the front he wrote to Lord Kitchener's private secretary on November 10, 1914: "I wish you would persuade K. to let the British public have a few more details of what the fighting has been like out here during the last fortnight. They have no idea of what has been going on. My 22nd Brigade returned to me yesterday to join the 7th Division. It consists of Brigadier-General Lawford, four regimental officers, and seven hundred and nine men.[1] All the Brigade Staff, and all the regimental officers, except four, have been either killed or wounded, for there are very few missing. The fighting has been of the bitterest. The *débâcle* was, I understand, saved on October 31st by the

[1] The brigade had left England on October 4th over 4000 strong.

regimental officers, who all behaved like heroes, and, after the last reserves had been thrown in without stemming the tide, managed to rally their men and turn on the astonished foe. They succeeded in driving the Germans back to their positions, not because they were helped by artillery, but simply because they refused to acknowledge that they were beaten. All this, I think, ought to be known to the nation. It would be the greatest incentive to recruiting."[1]

In times of stress at the front the effect of information at home is apt to be forgotten unless careful provision has been made for supplying it judiciously beforehand, so that the maximum of good may be obtained from it, while divulging as little as possible that might be of service to the enemy. The application of what Clausewitz called the principle of public opinion needs as much consideration as the application of any other principle of war.

If surprise is of supreme importance in war, it follows that it is also of supreme importance to avoid being surprised. Every soldier knows that every force, whatever its size, must always be protected either by outposts or by advanced, rear and flank guards, and that every effort must be made to watch the enemy's movements so closely that information of them is always forthcoming. But despite all the care which in any well-trained army is always given to services of observation and protection, the unexpected is still a commonplace in war. Even where the enemy's dispositions and movements are known with reasonable accuracy, it is rarely possible for the most astute commander to read the mind of his opponent. If one of the best ways to obtain surprise is to have a clear

[1] *The Life of Lord Rawlinson of Trent*, Maurice, p. 116.

object, which is not divulged till the last possible moment, one of the best ways of avoiding surprise is to be prepared for the unexpected. It is a fatal mistake to have a fixed idea as to the enemy's intentions. The elder von Moltke was once discussing, with a number of his general staff officers, appreciations of the situation which they had prepared for him, and in doing so he said : " Gentlemen, I notice that there are always three courses open to the enemy, and that he usually takes the fourth." Hooker at Chancellorsville was completely thrown off his balance when Lee took the fourth course. To be ready for the fourth course you must always be ready to meet attack from any possible direction, ready not merely by having protective troops properly disposed, but mentally ready, ready with a plan. The great commanders of the past have not acted by inspiration or by instinct, they have been distinguished by their capacity for thinking ahead of events, so that events have never surprised them. The best way to acquire this mental readiness is to have such a sound grasp of the principles of war that it becomes as natural to apply them correctly as it is natural for a first-class batsman to apply the right stroke to a difficult ball. This power of thinking ahead is as important in securing as it is in avoiding surprise. It comes naturally to few, but can be acquired by many, and is one of the attributes of generalship, of which surprise and mobility, sister principles of war, are the supreme instruments.

The methods by which surprise is obtainable in war, then, are:

(1) By secrecy and rapidity of preparation.
(2) By mystifying and misleading the enemy as

to the object. This requires unity of control and careful forethought, or the object may be inadvertently disclosed.

(3) By daring to do what is difficult and therefore unexpected by the enemy. Here too the secret of success is well-considered preparation.

(4) By mobility.

(5) Surprise by new weapons and by new methods with existing weapons is rarely completely successful without previous experiment and training.

(6) While secrecy is of the highest importance, its advantages have to be balanced against the advantages of giving the troops sufficient information to ensure intelligent co-operation, and the public sufficient information to maintain morale.

(7) The best way of avoiding surprise is, after taking all due military precautions, to be prepared mentally for the unexpected.

CHAPTER XI

THE PRINCIPLE OF CONCENTRATION

Concentration requires the application of the principles of war in combination—Contrast between the methods of J. E. Johnston and Lee in 1862—Concentration on exterior lines—The Montenotte method—Difficulties of penetrating an enemy's centre—The Allenby method—Examples of penetration of a flank—The Grant method—Wearing down the enemy—The Waterloo method—Concentration of divided forces on a battle-field—Effect of new means of communication on this manœuvre—Effect of increased power of resistance of a force on the defensive—Effect of increased mobility on concentration—Conclusions.

CONCENTRATION of superior power at the right time and place is the stock recipe for victory. Therefore all the other principles of war lead up to the application of this principle of concentration. Hitherto we have been examining these principles separately, now the time has come to review them together. I have likened them to the links of a chain, but perhaps a more appropriate comparison would be with the materials and methods used in the erection of a building. Security is the foundation; the object is the ground floor, economy of force the considered use of the material available; co-operation is the cement which binds the bricks, and the offensive represents the spirit in which the workers must attack their task; mobility and surprise are the means of getting the material to the spot in the best way, and concentration is the completed building.

We have seen that if security is neglected the process

of concentration may be upset by the anxieties of a statesman, or a sudden change of plans and dispersion of force may be necessary to parry a threat against unprotected bases or communications; that if the object has been badly chosen, or if we have too many objects at once, there is waste of power. By economy of force, mobility and surprise we may hope, even if in inferior force in the whole theatre of war, yet to be superior at the decisive time and place. Since complete victory cannot be won without attack, concentration, which has not the offensive in view, fails in its main purpose, while we cannot expect to strike an effective blow unless the various parts not only of our military but of our national powers co-operate.

The application of the principle of concentration then requires us to do much more than to ascertain where the enemy's main forces are, and move our own in the greatest possible strength to meet them. That is a method which may be effective when we are so fortunate as to have such superiority of power that we do not need to bother about manœuvre. In the Nile campaign of 1898, when we were opposed to an undisciplined and badly armed enemy, the problem was to get our army to the field of Omdurman, and manœuvre was a secondary consideration, but we very soon learned in the South African war that, if we were to be victorious, it was necessary to do something more than bring superior numbers against the Boer positions.

There is no more striking example in the history of war of the difference between a plain straightforward concentration and concentration planned by a great commander than is afforded by the opening of the campaign of 1862 in the American Civil War. At the end of March in that year the Confederate army in

Virginia was commanded by J. E. Johnston, a fine tactician but a general whose grasp of strategy was limited. Richmond, the Confederate capital, was the hub of the wheel of the Confederate theatre of war, and against it the Federal forces, amounting in round numbers to 180,000 men, were preparing to move along the spokes from the east, north, north-west and west. Johnston proposed to the Confederate President, Jefferson Davis, that the largest possible force should be assembled round Richmond, and battle be offered there for the defence of the capital. He was loth to send his troops into the York Town peninsula, where McClellan had begun to land, because the climate there was unhealthy, and he chose the obvious alternative of digging in around Richmond, and fighting it out there to the last.

Lee, who was Davis' military adviser at this time, saw that this was a council of despair. The Confederates could not hope to assemble more than 90,000 men round Richmond, where they would probably be cut off from the rest of the Confederacy, while the enemy would be free to draw upon his huge resources to maintain and reinforce his attacking army. The best that Johnston's plan offered was the prospect of wearing out a much stronger army in a slogging match. There was not the remotest possibility that it would enable the Confederates to be in superior power anywhere, and there was a far from remote possibility that it would end in the surrender of the Confederate army around Richmond.

Lee therefore decided to try the effect of manœuvre. For manœuvre he required time, and he persuaded Davis to order Johnston into the York Town peninsula to oppose and delay McClellan, and he used the time

so gained to start Stonewall Jackson on his campaign in the Shenandoah Valley, which resulted in the dispersion of the Federal forces converging on Richmond from the north, north-west and west, and enabled Lee at the end of June to be in superior force at the decisive point when he began the battles of the Seven Days. So little did Johnston understand what was in Lee's mind that on May 10th, five days after Jackson had opened his campaign by defeating the Federals at McDowell, he wrote to Lee: "If the President will direct the concentration of all the troops of North Carolina and of Eastern Virginia, we may be able to hold Middle Virginia at least. If we permit ourselves to be driven beyond Richmond, we lose the means of maintaining this army. A concentration of all our available forces may enable us to fight successfully. Let us try." Lee's plan resulted not only in holding Middle Virginia, but ultimately in driving the Federals out of Virginia altogether. He saw that the one way to obtain superiority at the decisive time and place was to cause the enemy to disperse his forces, and he began his process of concentration by dispersing his own forces in order to threaten Washington. Johnston's sole idea was to concentrate against the enemy's main forces, without hope of obtaining superior power. Lee applied all the principles of war, Johnston only one.

But this is, as I have said, an example of operations on interior lines, the advantages of which we cannot hope normally to enjoy. Let us therefore examine some examples of concentration by commanders who have not had that advantage. There are four types of such concentration. The first is that of an army holding the outer circumference of an arc against an enemy on the inner circumference, which we may

call the Montenotte type, because it was practised by Buonaparte in 1796 in the opening phase of the first campaign in which he was in supreme command, and that phase resulted in the battle of Montenotte. The second is the case of two armies on parallel fronts, as happened in Palestine in September 1918. We will call this the Allenby type. The third is the case of an army, assured of superior numbers and resources, whose commander for one reason or another decides to put fighting before manœuvre. This we may call the sledge-hammer, or Grant type, because it was adopted by Grant when he became Commander-in-Chief of the Federal armies against Lee in 1864. The fourth is the case of the convergence of two separate armies against a united enemy, which we may call the Waterloo type, because victory was won on that field by the junction of the armies of Wellington and Blücher.

First, then, the Montenotte type. In March 1796 two French armies were on the Franco-Italian frontier, then the frontier of Piedmont, opposed to Austrian and Sardinian armies. In the French Alps the opponents neutralised each other with armies of about 20,000 men. Further to the south in the northern part of the Apennines, the French front, from the mountains north of Nice stretching away eastwards towards Genoa, was held by the French army of Italy, of which Buonaparte took command towards the end of March. His army was about 37,000 strong, but ill equipped and poorly provided with artillery, and opposed to it were Austrian and Sardinian forces numbering about 60,000 men with a great superiority in artillery over the French. An appreciation of the situation attributed to Buonaparte gives us a clear outline of the strategical problem:

"When two armies stand on the defensive, that one which can more quickly reunite the different posts in order to carry the posts opposed to it, necessarily needs a smaller number of troops and, forces being equal, already secures advantages.

"The frontier of Piedmont is a semicircle, the two armies of the Alps and of Italy occupy the circumference, the King of Sardinia occupies the diameter. The circumference we occupy is full of passes and of difficult mountains. The diameter occupied by the King of Sardinia is an easily accessible, fertile plain, where he can, within a few days, transfer troops from one end of the diameter to the other. The defensive system is, therefore, always favourable to the King of Sardinia. In order to secure equality of forces we must have double the number of our enemies.

"These remarks are of the greatest moment. It would be easy to demonstrate it by describing the frontiers in detail and by analysing the different wars of which they have been the scene. It would then be clearly demonstrated that each time we have kept on the defensive on the frontier of Piedmont, we have always wanted a large number of troops and we have always been worsted in small affairs. The offensive system must be adopted for the frontier of Piedmont." [1]

Buonaparte then proposed to apply to the situation the principles of mobility and of the offensive in order to be superior at the decisive time and place. But he had to consider other principles. His army was extended in the mountains parallel to the coast, and his line of land communications was the famous Corniche road, which runs from Nice to Genoa, then in

[1] Quoted by Foch, *Principles of War*, p. 66.

a very different condition from that in which it is to-day. It was incapable of carrying all the supplies which he needed for his army, and had to be supplemented by coastal boats from Toulon and Nice. The Corniche road was exposed to attack from the sea, of which the British had command, and Nelson was off the Mediterranean coast of Northern Italy. The problem of security was no easy one to solve, and Buonaparte gave, as he always did, very close attention to it. He let it be known that his objective was Genoa. The Republic of Genoa was then a neutral State inclined to favour the French, and the town had been occupied by the Austrians. He had extensive naval preparations carried out at Toulon and took care that news of them should get out. This news convinced Nelson that Buonaparte had in view a landing behind the Austro-Sardinian front on the coast of Tuscany. Nelson, who had but his own ship, *Agamemnon*, could not both guard against this and interrupt the French communications, and, considering the former the more important, he gave up the latter. Thus Buonaparte owed the success of his first campaign largely to the mistake of our Admiralty in not keeping a sufficient naval force off the coast. Nelson wrote to Lord Keith in 1800: "You will now bear me out in my assertion, when I say that the British fleet could have prevented the invasion of Italy, and if our friend Hotham had kept his fleet on that coast, I assert, and you will agree with me, no army from France could have been furnished with stores or provisions, even men could not have marched." [1]

[1] *The Influence of Sea Power upon the French Revolution and Empire*, Mahan, Vol. I. p. 200. The whole of Mahan's account of the naval aspect of the campaign of 1796 is well worth study.

Buonaparte, who knew of Nelson's limitations, succeeded in deceiving him, but he took the precaution, in case he did not succeed, of guarding possible landing-places with batteries, and of calling up reserves to garrison them as soon as he was ready to put his plan into execution. His object was to separate the Austrians from the Sardinians and then defeat the latter, for the Sardinians, who were nearer the coast, would be on the flank of any French advance against the Austrians; the Sardinians disposed of, he intended to turn against the Austrians. In other words, his plan was to penetrate the centre of his enemies and deal with their divided parts in detail. The army immediately opposed to Buonaparte was commanded by the Austrian General Beaulieu, and consisted of 35,000 Austrians and 25,000 Sardinians. On learning of Buonaparte's intention of moving on Genoa, for the latter had taken pains to confirm the impression that such was his plan, and had both asked the Genoese Republic for leave to march through their territory and moved an advanced guard down the coast towards Genoa, Beaulieu decided to anticipate his enemy, and moved forward in two columns, one from Genoa against the French right, the other by the Savona Pass against their right centre. This move into the mountains made Buonaparte's task easier, because it made communication between the enemies' columns more difficult. The Army of Italy held five passes of the Apennines; from left to right, the Tenda, Ormea, San Giacomo, Cadibona, and Savona passes. As soon as he got news of the enemy's forward movement, Buonaparte, leaving the detachments at Tenda and Ormea to hold the enemy's right, rapidly concentrated the remaining three, and on April 12 with 14,000

men defeated the Savona column some 9000 strong near Montenotte. Following up this success at once, by April 15 he had placed his united army between the enemy's widely divided wings.

This is an example of concentration by a force on exterior lines with penetration as its object. In bringing it about Napoleon applied, as we have seen, the principles of security, mobility, surprise, the offensive, and he also applied that of economy of force, for on his left the detachments at Tenda and Ormea, 14,000 strong, contained 25,000 of the enemy, and on his right at Voltri, a single brigade contained Beaulieu's column advancing from Genoa, which was 7000 strong. By these means Buonaparte was in superior power at the point which he had chosen for his main effort—Montenotte.[1]

Penetration of an enemy's front with the object of dealing in detail with the divided parts is, in these days, a more difficult operation than it was in Buonaparte's day, for to be successful it must be completed quickly, otherwise the enemy, alarmed by attack, will concentrate at the danger point. Penetration never succeeded on the Western Front, partly owing to the difficulty of getting over ground seamed with trenches and torn by shells, and partly owing to the delaying power of modern weapons. The latter is the prime difficulty in the way of penetration of the enemy's centre, and the chances of its succeeding in these days, even when an enemy is not strongly entrenched, are doubtful, except when the enemy's morale is low and the attacker is very superior in power. It is, however,

[1] A good summary of this campaign is to be found in *Napoleon as a General*, York von Wartenberg—the Wolseley Series—Vol. I. chap. ii., and also in Hamley, 1907 edition, p. 144 *et seq.*, but this is somewhat less accurate in detail.

possible, as I have said already, that a surprise attack by tanks over ground favourable to their action against an enemy unprepared to meet attack in that form might be rapidly successful, but it would seem that the mobility of tanks could normally be better used in other ways, which I will suggest when I come to the Waterloo method.

I have described in the previous chapter the methods adopted by Allenby to prepare for his attack on the Turkish lines in Palestine in September 1918. This was a case of concentration against an enemy on a parallel front. His entrenched front, with the sea on one flank and the Arabs on the other, relieved Allenby from all anxiety as to his communications, and he did not have to take the measures of security which were Buonaparte's first care, but in other respects his methods were very similar to those of 1796. We find the same elaborate care taken to deceive the enemy as to the object, the same use of economy of force to obtain superiority of power, similar application of surprise and mobility. Allenby's penetration was carried out with the object of enveloping the enemy's flank, and this form of attack has to-day greater chance of success than penetration of the centre, because the enemy hurrying up to close the breach can come only from one direction. In these days of long-range guns, artillery coming up from both sides can, on ground favourable to its action, make it difficult for infantry to pass through a gap as much as from eight to ten miles wide, and practically impossible to bring up transport after the troops. If to the attack of artillery the attack of aircraft be added, the risks of attempting to pass through a gap, the width of which Buonaparte would have regarded as highly satisfactory, are evident. These

risks are much reduced if the object is penetration of a flank with a view to envelopment.

But in considering the success of Allenby's manœuvre we must take into account the relative strength of the opposing forces. At the beginning of September 1918 the British ration strength in the theatre of war was, according to the "Statistics of the Military Effort of the British Empire," 453,629. Of those, 147,355 were unarmed native labour units, an indication of the amount of effort required to give Allenby the mobility which a good line of communication affords; 8437 were Egyptian and native troops other than Indians; the Indian contingent amounted to 95,406; the British and Dominion white troops to 202,431. The fighting strength at the front was approximately 12,000 cavalry, 57,000 rifles, and 540 guns. The Turkish ration strength south of Damascus was approximately 100,000, and Allenby's estimate of their fighting strength 2000 cavalry, 32,000 rifles, and 403 guns, though the German commander, Liman von Sanders, puts it at a considerably lower figure. When his concentration was completed Allenby had approximately 9000 cavalry, 35,000 infantry, and 383 guns, on the fifteen miles of coast nearest the coast, opposed to 8000 infantry and 130 guns. The numerical and material superiority was therefore overwhelming, and the moral superiority was as great, for the Turkish troops were weary, dispirited and distrustful of their German masters, while Allenby's army, inspired by the campaign which had ended with the capture of Jerusalem, was confident in itself and its commander.

On the Western Front in 1914 the German campaign began with penetration of a flank with the object of envelopment. It succeeded, not only because the

Germans had taken care to provide themselves with the right kind of weapon to overcome quickly the forts of Liége, but also because they had had ample time and had been at great pains to prepare in detail their arrangements for rushing the intervals between the forts. Officers in plain clothes had reconnoitred in peace-time, both by day and by night, the routes to be taken, and the troops for the operation were carefully picked. Further, the great reputation of their army and the knowledge of its immense power gave the Germans a moral ascendancy over the Belgians which increased the effect of surprise. Even with these advantages the night attack of the 5th and 6th August on the intervals between the forts nearly failed, and success was only obtained through the personal example and cool head of Ludendorff, who as a staff officer happened to be present at the operation as a spectator.[1]

The French also attempted penetration of a flank with the object of envelopment in August 1914, when they began the invasion of Alsace-Lorraine, and their main concentration was made on their right for that purpose. It failed, partly, as I have explained, because they neglected to apply the principle of economy of force, and still more because they had not weapons to enable them to overcome the German entrenchments.

In October and November 1914 the Germans made a second attempt in the battles of the Yser and Ypres to penetrate a flank with the object of envelopment, and they hoped to obtain both surprise and the necessary power by bringing up the four new army corps, which they had secretly raised since the outbreak of war,

[1] Ludendorff, in *My War Memories*, Vol. I., p. 34 *et seq.*, gives a dramatic account of this adventure.

corps mainly composed of young volunteers. The attempt failed, partly because the Germans were stopped on their extreme right by the flooding of the Yser valley opposite the front held by the Belgians, but still more because of the stubborn resistance of the British infantry, against which the main effort was made. The gallant youngsters of the new German formations suffered heavy losses owing to inexperience, and owing to the same cause they had not the tactical skill and confidence to enable them to follow up promptly initial successes. The general conclusions which I draw from these examples is that in the present state of armaments the success of any form of penetration depends upon time being available for careful preparation, upon possessing considerable moral and material superiority, and upon being able to add to this superiority by the effect of surprise.

I come now to my third method of concentration by forces on parallel or exterior lines, which I have called the Grant method. From the spring of 1862 to the summer of 1863 Lee, by the skilful use of interior lines, had outmanœuvred the Federal armies in Virginia, and had succeeded in battle in being in superior power at the decisive time and place, though inferior in power in the theatre of war. In the summer of 1863 he had followed up his victory at Chancellorsville by once more outmanœuvring his opponent, crossing the Potomac and invading Pennsylvania, but that invasion had ended in his defeat on the field of Gettysburg. The consequence of this failure was to reduce greatly his resources, while the Federal power was constantly increasing. Therefore in 1864 Lee was forced to act strategically on the defensive in Virginia. In the spring of that year the Federal

President, Abraham Lincoln, appointed to the supreme command of the Federal forces Ulysses Grant, who had made his name by the conquest of Vicksburg on the Mississippi. Grant realised that the trump card in the Federal hand was superiority in resources, the Confederate trump card Lee's skill in taking advantage of his interior lines. His plan of campaign for Virginia was, while using his own trump card, to deprive his enemy of the opportunity of playing his usual game. He, therefore, personally directed the concentration of superior numbers against Lee, and determined to force him to fight whenever and wherever possible, in other words, to wear him down, while at the same time covering the Federal capital, Washington, the exposed position of which had been the key to Lee's manœuvres. By resolute refusal to be drawn from his object, despite criticism, of which there was plenty, and despite numerous failures of attempts to defeat his enemy, Grant ultimately succeeded in pinning Lee in the lines around Richmond, where the latter was deprived of his chief weapons, mobility and skill in manœuvre. From these lines Lee was eventually forced to attempt a hopeless retreat, which resulted in the surrender of Appomattox.

This policy of wearing down the enemy was that adopted by the Entente Powers on the Western Front. Like Grant they were opposed to an enemy who had the advantage of interior lines, like Grant they possessed resources superior to those of the Central Powers, and just as Grant had to cover Washington, they had to cover the Channel ports and Paris, while after the failure of the Dardanelles expedition their powers of effective manœuvre against the Central Powers were gravely restricted. The Western Front became the

decisive front in the war, and therefore the front on which the greatest possible concentration of the power of the Entente was required, not merely because the principal German forces were on that front, but because, being on interior lines, the Central Powers could bring other forces from other fronts more quickly to that front than could the Entente Powers. It was therefore necessary for the latter, for the sake of security, to have their principal forces on the Western Front, and the only choice open to those forces was either to remain passively on the defensive, which would leave the Central Powers full liberty to act elsewhere, or to attempt to wear down the enemy by attack. This process of wearing down the enemy is a crude and costly form of generalship, only to be adopted when no other method can be applied, but it may be the only possible method against a skilful and mobile enemy who enjoys the advantage of interior lines. When adopted it becomes a question of reducing the losses of attack, and of increasing the losses of the enemy by tactical skill in the employment of the most suitable weapons.

The last of my various methods of concentration open to armies operating on exterior lines, which I have called the Waterloo method, is that of concentration of divergent forces upon a battle-field, with the object of striking at one of the enemy's flanks. After Wellington's and Blücher's armies had retreated from Quatre-Bras and Ligny respectively, on the morning of June 17, 1815, the Duke was informed that the Prussians had retreated on Wavre, and it was obvious that the only reason for retiring in that direction, which was a turn away from the direct line of the Prussian communications through Liége towards Wellington's

army, could be co-operation with the latter. The Duke therefore had grounds for assuming that Blücher intended to support him, and in the course of June 17 he wrote to the Prussian Commander-in-Chief that he would accept battle on the following day in the position in front of Waterloo, provided that he received the assistance of two Prussian corps. There is some doubt as to the nature of the communications between Blücher and Wellington on the night of the 17th–18th, but it is certain that in the early hours of the 18th the Duke received a written assurance from Blücher that he would come to his assistance not merely with two corps but with the greater part of his army.[1] Wellington had no intention of offering battle voluntarily to a superior enemy without reasonable certainty that he would be supported, and with that reasonable certainty the problem before him was whether he could hope to hold off Napoleon's attacks until the Prussians, who, though they had been roughly handled in the battle of Ligny, had been joined by another corps, which had not been engaged on that field, made their weight felt. Wavre was rather more than ten miles distant from Wellington's left, the roads between that place and Wellington's position were bad, and the Prussians would certainly meet with some opposition to their advance; it might therefore be as much as eight hours before they could take an effective part in the battle, and at Ligny Napoleon had defeated an army as strong as Wellington's in seven hours. There was therefore a distinct element of risk in the Duke's decision to stand, the more so as of the 67,661 men of

[1] For details as to these communications see *The Campaign of Waterloo*, Ropes, Chap. XII. This is a careful and accurate account of the campaign.

his army who fought at Waterloo, only 23,991 were British, and these were by no means the equals in quality of the men whom he had commanded in the last years of the Peninsular War. But the Duke had seen Blücher's dispositions for the battle of Ligny, and recognising them as bad, had prophesied that the Prussians would be "damnably mauled." His long experience of French tactics, and of the effect of his own in opposition to them, had given him confidence in his tactical ability, and he had good ground for believing that he could so dispose his army as to enable it, if necessary, to sustain the French attacks longer than had the Prussians on the 16th, long enough indeed to ensure the junction of the two armies. The issue of the battle of Waterloo turned upon the power of Wellington's army, standing on the defensive, to hold off the French offensive until the Prussians came down on Napoleon's flank. It is noteworthy that despite this, such was the effect of Napoleon's preliminary manœuvres upon the Duke's mind, that the latter kept at Hal a detachment of 18,000 men to guard his right flank and his communications with the sea, and that this detachment took no part in the battle.

Napoleon had detached from the field of Ligny 33,000 men, under the command of Grouchy, to follow up the Prussians, whom he had supposed would follow their natural line of retreat. The last thing that he anticipated was that they would appear upon the field of Waterloo, and he was in no hurry over his preparations to attack Wellington's position. In the event the battle began with Reille's attack on Hougomont about 11.30 a.m. on June 18th, and the main French attack did not begin until about 1 p.m., by which hour Napoleon himself saw the first Prussians appearing

on his right, and before 3 p.m. he had had to detail a corps intended to support his main attack on Wellington, in order to hold off the Prussian advance. By 7.30 p.m. the development of the Prussians in force against Napoleon's flank, combined with Wellington's advance against his front, resulted in the rout of the Emperor's army.

I have chosen my first and last illustrations of methods of concentration by armies operating on exterior lines from the same period of military history in order to make clear the extent to which the results obtained by concentration depend upon tactics and the conditions of time and space. I might indeed have chosen a period within narrower limits and taken my illustrations from the days of June 16th and June 18th, 1815, but having used Napoleon's concentration before Ligny to explain another principle, it seemed better to select a different example. Both in the spring of 1796 in the Montenotte campaign, and in the summer of 1815 in the first movements of the campaign of Waterloo, Napoleon deliberately forced his way between his opponents. At Montenotte and at Ligny he was successful, at Waterloo he failed disastrously. Why? In the Montenotte campaign the conditions of ground and armament were in his favour. The Austro-Sardinian columns were divided in their advance by mountain spurs, across which movement and even communication was slow and difficult. Napoleon, with the heads of these passes in his hands, could unite against either more quickly than they could support each other. Farther in the mountain country his enemies' opportunities for employing the arm in which they were very superior, their artillery, were much restricted. He could therefore count on having

time to hold the Savona column in front, bring superior forces down on its flanks, and destroy it, before the German column could intervene. The tactical conditions and the conditions of time and space were in his favour.

At the beginning of the Waterloo campaign Napoleon had succeeded by his preliminary movements in catching his opponents in what he used to call "flagrant délit de concentration," and on June 16th he was able to strike at Blücher before the whole of the Prussian army was assembled for battle, and while Wellington's army was only just beginning its concentration. Again the tactical conditions and the conditions of time and space were in his favour. But from the time when he failed to prevent Blücher from uniting with Wellington he was in grave danger. The strategical and tactical conditions were then favourable to his enemies.

Now in the 1907 edition of Hamley's *Operations of War*, the editor, Sir Lancelot Kiggell, has added to Hamley's comments in Chapter VII on campaigns illustrating these problems of concentration several pages which deal with the effects of telegraphy, field telephones, and visual signalling on strategy. He concludes these comments thus: "On the whole it appears that telegraphs will diminish, sometimes in a considerable degree, the disadvantages under which a divided force operates against a concentrated force, and that they will enable a general to divide his army, whether for defence or attack, with more confidence than heretofore. But they will not alter, in an appreciable degree, the ignorance of what is passing behind an enemy's front, and its consequences. False theories of his intentions will still be formed and the

false movements that spring from them will still be beyond remedy. The errors which led Wellington to expect Napoleon's attack in a different quarter and to keep a detachment at Hal, and which caused Napoleon minus Grouchy to meet the combined armies of his foes, were such as the telegraph would have failed to avert. Generals will know more of what is passing in view of all parts of their front, but not necessarily of what is taking place beyond."

Now since 1907 almost as great an improvement in means of communication has taken place as occurred between 1815 and that year. The efficiency of field telegraphy and telephony has been greatly increased, and wireless has come in to supplement them, fast motor-cars and aircraft provide a further means of intercommunication, while aircraft afford a commander means of ascertaining what is taking place " beyond " which did not exist twenty years ago. Still, all these means of obtaining and transmitting information are liable to failure. Aircraft may be deceived or prevented by fog and mist from observing when they are most needed. Telephone and telegraph lines may be cut at critical times, wireless may be jammed or messages sent by it may be intercepted. During the critical days which preceded the battle of the Marne, German G.H.Q. relied almost exclusively upon wireless for communication with its armies on the right flank, and owing to congestion and jamming, the transmission of instructions was greatly delayed, so that control of those armies was lost at a critical time. Accidents will still have a vital effect upon combination in, and the unexpected still be a commonplace of, war, but the general trend of scientific progress is to make communication more and more certain, and therefore the timely concentration of divided forces easier.

But there have been developments which exert an even more important influence in the same direction. We have seen that Wellington's problem on the morning of June 18, 1815, was whether with 67,000 men and 156 guns, of which some were of doubtful efficiency, he could hold out for eight hours against attack by some 90,000 men with 246 guns. Napoleon's strength at Waterloo was actually 72,000, but Wellington did not know that he had detached as many as 33,000 with Grouchy, and he had to be prepared for attack by the larger number. Now the resisting power of a force acting defensively has increased out of all proportion since 1815. We have seen that on August 23, 1918, the first day of the battle of Mons, some 36,000 British troops were engaged from 9 a.m. till after dark with 80,000 Germans and prevented the latter from doing more than reach our main position. It is at least doubtful whether, on such ground as the battle-field of Mons presented, the aid of tanks would have made the German progress against our front more rapid, for the part of the ground over which the Germans actually advanced, which was suitable for the action of tanks in numbers, was that opposite the right of our IInd Corps, and there our observation was excellent. Against an enemy in position, well provided with artillery, with good observation and expecting attack, a degree of artillery preparation to prepare the way for tank attack is needed, which takes time. On the other hand, a surprise attack by tanks, coming suddenly against our left flank on August 23rd, might well have been decisive, while even a front attack by tanks over ground favourable to their action, against an enemy in position but unprepared for such attack, may make it possible to overcome the resistance of a force acting defensively as quickly as could

Napoleon. But with this reservation it may be said that, as in the case of communications, so in the case of the development of tactics, the general tendency of the time is to make the concentration of divided forces easier and more certain, because the power of resistance of the force with which junction on the battle-field is to be effected is increased.

There is yet a third factor which affects this question, and that is the development of mobility. Let us suppose that on August 23, 1918, Lanresac's Vth Army had succeeded in holding von Bulow's IInd Army on the Sambre and checking the advance of von Hausen's IIIrd Army across the Meuse, and that therefore our right flank was in no immediate danger. Let us suppose also that we had had a mechanised force tucked away from German observation, say at Ypres or Béthune, both places being some fifty miles from our left flank. Such a force would to-day be in more certain communication with our G.H.Q. at Le Cateau than Wellington, at Waterloo, was with Blücher at Wavre, and taking into account the time required to overcome our resistance at Mons, and the rate of movement of a mechanised force, the two forces at Mons and Ypres, fifty miles apart, would have been as effectively concentrated for the purpose of battle as were the armies of Wellington and Blücher, ten miles apart on the eve of Waterloo. If our imaginary mechanised force at Ypres had appeared on the German right late on August 23rd, or even early on August 24th, its effect might have been comparable with that of the appearance of the Prussians at Planchenoit on the evening of June 18, 1815, or of Jackson on Hooker's flank on the evening of May 2, 1863.

The general tendency of development, then, is more

and more favourable to the timely concentration of divided forces upon a battle-field and more favourable to surprise attack by comparatively small, highly organised, powerfully equipped, and highly mobile forces. We would seem to be on the eve of the fulfilment of that prophecy which von der Goltz made in 1883 in the introduction to his *Nation in Arms:* "A day will come when the conditions which at present dominate war will disappear, when forms, customs and opinions will again change. If we hazard a glimpse into the future, we can foresee a time when the armies of millions of the present day will have played their part. A new Alexander will appear, who with a small force of suitably equipped and highly trained troops will drive before him the impotent hordes which in their eagerness to multiply have overstepped all proper bounds, have lost cohesion, and like the Green-banner armies of China have become a vast spiritless host of Philistines."

We cannot be certain of having an Alexander when and if we need him, but we at least seem to be in the way of providing him with the right means if he appears. In great war or in small war mobility, surprise and a clear well-chosen object are the principal means of effecting that concentration which brings superior power to bear at the right time and place, and those developments with which we are now experimenting tend, by providing mobility, to help us to employ the special powers which we possess in the best way. We need no longer fear dispersion in space if we can obtain concentration in time. In any great war we may expect in the future as in the past to be the member of an alliance, and we may hope if we study now how best to employ our sea, land and air power in

combination, how to add to mobility the correct choice of object, and the use of surprise, to find more effective forms of concentration than the prolongation of the front of an ally.

To sum up. The purpose of concentration is to obtain superior power in battle, therefore the form of concentration must depend upon the manner in which it is proposed to give battle; upon the object, whether that be penetration of the enemy's centre, strategical and tactical envelopment, or attack upon a flank by the timely junction of divergent forces. Effective concentration usually requires the application of several, sometimes of all, the principles of war, and it requires above all exact knowledge and accurate calculation of the conditions of time and space. These conditions are ever changing, and unless we keep our minds alert and study the effect of these changes upon the application of principles, not even the best trained, best equipped and bravest troops will suffice to win victory.

CHAPTER XII

CONCLUSION

Some suggestions for the study of war.

THE prime object of the maintenance of the armed forces of the nation is the prevention of war and the maintenance of international law and order, just as the prime object of the maintenance of the police force is the prevention of crime and the maintenance of internal law and order. The use of the "armed forces at sea, on land, and in the air" is, as Field Service Regulations, II. 2, say, "the last resort." It is the business of the Government to decide on the amount of armed force necessary both for the prosecution of war and for the restoration of peace if war comes. It is the business of all who belong to the armed forces of the nation to be prepared for the tasks which the nation may require of them. Effective preparation within the limits prescribed by the Government is one of the guarantees of peace.

This preparation falls within three main divisions: the organisation and equipment of the forces provided by the Government, the training of those forces, and the training of the minds of those who are required to lead. The organisation and equipment of the army is the business of the War Office, which also supervises and directs the other forms of preparation. In the army the chief elements in the training of the troops are discipline, morale, physical fitness and

mastery of the best weapons obtainable, severally and in combination, in the greatest possible variety of conditions. The training of the minds of the leaders is a matter of practice and of study, which is the concern of each individually, and the object of formulating these principles of war is, as I have said, to help this study.

We have now reviewed these principles, but that is only the beginning. It does not require much application to memorise both these and the points to be considered in the application of each. But it does require a great deal of thinking to bring the mind to a state in which it can see clearly through the new impressions, the strange incidents, and the unexpected events of war to the principles applicable to them: in other words, to acquire a sound military judgment.

I began with Clausewitz and Foch, and I will end with them. The former said of these principles: "There is no doubt that the conduct of war is very difficult, but the difficulty does not lie in the fact that learning and genius are required to understand the principles of war; a reasonably intelligent brain, which comes to the subject without prejudice and some elementary knowledge, can grasp them. There is even no difficulty in applying these principles on the map and on paper, and it is no great achievement to draw up a good plan of operations. The whole difficulty consists in being true to the principles which we have established, when it comes to applying them in war."

The way to overcome this difficulty is, as Foch said, to develop "the power of analysis and of forming correct conclusions by an objective study of past experience, that is, of history." Personal experience

of war is invaluable, primarily because it helps to the understanding of the moral factors, which are supreme in war, and gives those who have had the advantage of it confidence in their powers to deal with them. But since the next war is never like the last, it is insufficient, and as time passes, after a great war, the number of those with practical experience of war diminishes. Therefore the study of past experience is necessary.

Napoleon's advice as to how to set about this study is still sound, if we examine it, as we should examine all advice about war, in the light of the circumstances in which it was given. "Read and re-read," he said, "the campaigns of the great commanders," and he went on to cite a list of great commanders whose campaigns should be studied, beginning with Alexander, Hannibal and Cæsar, going on with Gustavus Adolphus, Turenne and Marlborough, and ending with Frederick the Great. In this he was advising his officers to organise their study of war into three periods, taking first ancient war from Alexander to Hannibal, following it with a middle period from Gustavus Adolphus to Marlborough, and ending with a study of the methods of the great commander nearest to their own time, Frederick the Great. The purpose behind this is clear. He wanted his officers to learn, first, that certain broad general principles guided the action of all these masters of war, and next that the methods which they used in applying these principles varied with changes in means and in the conditions of time and space. His object was to help his officers to prepare their minds to apply these principles when confronted by further changes in means and conditions.

Now in these chapters I have gone for my examples

as far back as Cromwell and Marlborough. But in these days, when we have at our disposal a wealth of recorded experience which was not available to Napoleon, the student of war to-day need not go as far afield as did Napoleon's officers, and not even as far as I have gone. When he has grasped these principles of war and the general methods of applying them, he can practise his mind sufficiently to enable it to cope with the problems of future war, if following Napoleon's method he begins with Napoleon himself. A judicious selection from Napoleon's campaigns, say the campaigns of 1796 and 1815, may limit his researches into the past, at least when he is at the beginning of his task. For his middle period he cannot do better than go to the American Civil War, and from the history of this war I should choose the campaign of 1862, from March of that year to the end of the battles of the Seven Days, and the campaign of Chancellorsville in 1863. For recent war the campaigns of the Western Front in 1914 and in Palestine in 1917 and 1918 should suffice. In each case the object of study should be not to memorise facts, but to think about facts, to examine the conditions of material, that is the means, and the conditions of time and space, which prevailed in each campaign, and compare them with the conditions of to-day, to ascertain the principles upon which the commanders acted and to consider how their application of the principles would have been affected by modern means and conditions.

This done he should turn to the history of our combined naval and military operations, and again select examples from a distant, middle and recent period of history. Throughout his study he must keep himself up to date and watch changes in social and material

conditions which are likely to affect the factors which in turn affect the application of principles of war. He must think of war not in terms of naval, military and air power separately, but in terms of the application of national power; remembering that our national power in the past has been, in the present is, and in the future almost certainly will continue to be, like no other national power.

If war is a social phenomenon affecting in its highest development every aspect of national life, the conduct of war, leadership, is an art. Science is one of its instruments, it can never be its master, because of the infinite variations of the human factor in war, which as long as human minds and human muscles are required to direct machines must predominate, and because the leader in war can never have before him the complete data of the problems which he has to solve in war. For these reasons perfection in war is unattainable, and a reasonably good plan carried through with promptness and determination is better than a more perfect plan prepared slowly and executed with hesitation. But to form a sound decision and carry it through promptly and boldly it is necessary to master the art of war, and the master of any art is he who adapts most skilfully new methods to established principles.

There is nothing new in this. It has all been said by Clausewitz, by Foch and by Henderson, and by many others, for here what is new is not true, what is true is not new.